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ESSAYS IN FINANCE.

Second Series.

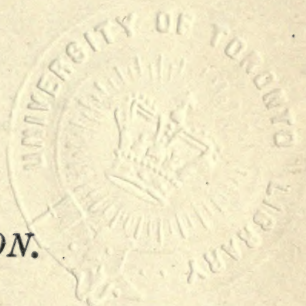
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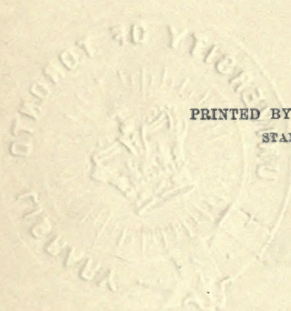
ROBERT GIFFEN.

THIRD EDITION.

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PREFACE TO SECOND EDITION.

IN preparing this volume for a new edition I have taken the opportunity to add a few notes, besides making verbal and literal corrections and amendments. Where it seemed to be expedient to take notice of the date at which the note was made, I have added to the notes now inserted the words "Note to Second Edition."

In the Preface to the fourth edition of the first series of "Essays in Finance," lately published, I have explained in some detail the connection between the Essays in that volume and the Essays in the present volume; and may be permitted to refer here to that Preface.

In his new book just issued,* Mr. Soetbeer points out very properly, with reference to the remark on p. 86, regarding his estimate of the gold required for use in the arts, that whether the gold so used is taken from the bullion market or from the coinage, the ultimate effect is precisely the same. The

* "Materialien," &c. By A. Soetbeer, Berlin, 1886.

amount available for use as coinage is diminished *pro tanto*. In this I entirely agree, and I must apologise to Mr. Soetbeer if my remark appears to have a different construction. I do not think the distinction is always kept in mind by those who make such estimates, and as coinage figures are used in the discussions in this volume, without deduction for what may be used in the arts, the remark in question was intended simply to avoid the danger of duplication in estimating the demands for gold. Of course, if it can be shown that these requirements are under-estimated, the argument in the volume will be strengthened. In so general a discussion I considered it most desirable to avoid anything like an over-estimate.

ROBERT GIFFEN.

44, PEMBROKE ROAD, KENSINGTON,

January, 1887.

PREFACE.

IN making a collection of Essays for a second series of "Essays in Finance" I have endeavoured to keep in view the object which I stated in the Preface to the former volume, viz., the selection of such Essays as contain discussions of topics of permanent interest, apart from the occasions which suggested the Essays themselves. It appears to be unnecessary, therefore, tempting as the opportunity may seem, to reopen in a Preface some of the discussions in the volume, and refer to the additional light thrown upon them by subsequent experience. This has been done in occasional notes scattered throughout the volume, but substantially such of the Essays as are reprints appear as originally published.

An attempt has been made, as far as possible, to keep together Essays bearing on connected topics, and subject to this they are mostly arranged in the order of the date of writing. I have taken care, as a rule, to notice this date in some part of each Essay, and in addition, where it seemed necessary, I have

added the year of writing in parenthesis at the end of each Essay.

The second Essay is entirely new, and the last, which was a paper read before the Statistical Society, has not been published before, although partial reports of it appeared in the press at the time it was read. The other Essays are reprints, but several were published anonymously, and all of them are more or less inaccessible. From my own point of view I have been desirous to collect them, as one Essay often supplements another, and in several of them discussions are continued which I commenced as long ago as 1872, and have resumed from time to time since, as will be seen by reference to my former "Essays in Finance" and to the earlier Essays of the present volume.

R. GIFFEN.

KENSINGTON,

February, 1886.

ESSAYS IN FINANCE.

I.

TRADE DEPRESSION AND LOW PRICES.

IN venturing to discuss the subject of the present depression of trade in special connection with prices, I feel that I may be taking an unfair advantage of some readers. What will interest them is the present depression—its causes and nature, and possible remedies ; not what may appear to them side issues, however interesting on philosophical grounds. But the question of prices, I confess, is the interesting topic to my own mind. In the whole range of statistical knowledge there are few subjects of deeper interest. The right appreciation of economic history is impossible without an adequate study of the course of prices, and they often explain many more things than the trade depression and prosperity, which are among the causes and effects of changes in prices themselves. Notwithstanding this difference in the point of view, my hope is that those who wish to study the question of trade depression in and for itself will not lose, but gain, by approaching it from a standpoint different from their own. The scientific treatment of a question which is often discussed with heat and passion can hardly be without its uses.

I.—INTRODUCTORY.

To clear the ground for debate, a few preliminary remarks seem desirable. First of all—what do we mean by trade depression? To hear some talk, one would think that, whenever trade depression is spoken of, the question is whether or not the whole industry of the country is being ruined. But there may be trade depressions which mean no such thing, and, in fact, of the numerous depressions which one remembers, or has read of, few have had that character. They have been merely passing phenomena, having many features in common, and having nothing so certain about them as that they must be passing, although it is the characteristic of the depressed talk of each period that recovery is treated as hopeless. In fact, they may arise entirely from a very moderate change, as compared with a period of prosperity, in the amount of employment for labour and capital. Thus, to take years like 1867 and 1868, which were years of undoubted depression, when men's hearts were failing them for fear of what the consequences of the great panic of 1866 might be, we find that the home production of coal was in round figures about 104,000,000 tons per annum, whereas in 1864 and 1865, only three years before, which were years of great prosperity, the production was on the average about 95,000,000 tons only. The production of pig iron, again, which averaged 4,800,000 tons in 1864-5, was rather more than that figure in 1867 and 1868. The traffic receipts of the railways likewise increased greatly in those years of depression as compared with the years of prosperity just preceding. Foreign trade increased largely at the same time. Pauperism, which had diminished by about 8 per cent. in 1866 as compared with 1864, rose once more in 1868

to the former level, but not beyond. I recollect no period, however, when trade was spoken of in more desponding terms than it was in 1867 and 1868. Precursors of our Fair Trade friends, in the shape of revivers of British industry and reciprocitarians, began to make their appearance; the City was dull, as every one said, beyond all previous experience, with money at 2 per cent. for an unprecedented time; a remarkable article appeared in the *Edinburgh Review*, discussing the strike of capital; no symptom was wanting to what is called a marked period of depression. "Depression," therefore, may exist when almost all the statistical signs point the other way; when production and consumption are on a large scale and there is real prosperity, although without the glow of a period of inflation. It is a not uncommon saying in the City that business is never so really sound and good as when prices are low, imports and exports declining, and everybody more or less depressed. I should not adopt this saying without qualification. All I am concerned to show is that the question of the real meaning of trade depression is most essential to the discussion. The depressions of which there has been experience in past times have been mostly transitory affairs, implying a very small reduction from the previous maximum of employment for labour and capital. The presumption is that, unless special reasons can be shown to the contrary, any new depression is of the same character.

Again, there is surely something very innocent in the oft put question—Why is trade depressed? Should not the question rather be—Why is trade ever prosperous? To keep in full employment the complicated machinery of a highly organized industrial community like that of England; to have matters so ordered that at a given time there is an excessive demand for labour and capital in all branches of

industry, and hardly any individual willing to work in fact goes without employment ; and to have all this accomplished by voluntary association and competition among the units of which society is composed, each pursuing his own interest, and labouring to produce what he believes other people will buy, is surely a miracle so astounding as to excite perpetual surprise that it should ever be performed. The marvel is not at all diminished by the fact that under no other conceivable system, socialist or other, could the same results be achieved. But if such results are a marvel, then it is no marvel, but rather the reverse, that at times the industrial machine should work rather less successfully, that there should be a hitch in the arrangements somewhere, and consequently a small margin of unemployed labour and capital resulting in what is known as a depression of trade. In a less complicated industrial community there is no mystery in depression when it comes. An agricultural community reaps a bad harvest, and it is depressed. In days when communication was bad, and the margins of all industrial communities were smaller than in modern times, the people starved and died. Only forty years ago, in Ireland, there was a bad harvest and resulting famine of the ancient type. A fishing community, again, is elated or depressed by the accidents or obscure causes which guide the movements of fish, and which give the fishermen an overflowing harvest one year and almost no harvest the next. The explanation of depression in such cases is as simple as it can be. In more highly organized communities industry appears to be steadier—and is really steadier, in all probability, being less dependent on any one cause than in communities of a lower type ;—but the fact of greater steadiness should not blind us to the consideration that even in such communities the failure of harvests and other

causes must have their effects. Nothing can mark more forcibly the progress of modern communities than the outcry about depression which arises when the slightest decline from a maximum period occurs. The variations which were formerly from abundance to famine, affecting almost the entire community, are now limited to a small percentage of the total production, so that prosperity and adversity, according to the statistical evidence, are hardly distinguishable, and good business authorities maintain that the times when people complain most are the times that are really the best.

A third remark I have to make at the outset is that as trade depression may arise from very small changes in the total amount of production, while industrial organization is of such a nature that such changes need cause no surprise, it becomes equally no matter for surprise that changes in prices have so intimate a connection with the subject. The feeling of depression, judged by the realities of things, frequently appears to be either wholly unaccountable or to go far beyond what the facts warrant. And the explanation would seem to be that as there is a general rise of prices in prosperous times, and prices remain then at a high level, so in times of "depression," when production and consumption and saving are diminished by a small percentage, as compared with what they are at other times, there is often a general fall of prices, and it is this fall of prices which produces much of the gloom. Merchants and capitalists are hit by it. At their stock-takings, with the same quantities of goods, or even with greater quantities, their nominal capital appears reduced. In falling markets their operations result steadily in loss for a considerable period. Many who have conducted operations with borrowed money are cleaned out, and fail. The community need be none the poorer. The goods them-

selves are not destroyed. Somebody gets the benefit of the lower prices. But the leaders of industrial enterprise, those who run the machine, are all poorer, and feel even poorer than they really are, as they are accustomed to look mainly at nominal values, and not at the quantities of the things themselves which they possess. The moral is that economists and public men should beware to some extent of the outcry from the market-place. Merchants and capitalists are not the whole community. Their interest in the long run is the same as that of all. No community can prosper steadily with its mercantile classes depressed. But the immediate interest of particular classes is often different from that of the community generally, and in this way it is not surprising that the gloom of the market-place in times of depression should appear altogether excessive in relation to the real circumstances of the community as a whole. Apart from exaggeration, which is also a factor to be reckoned with, the particular classes who cry out most from time to time about depression may suffer specially from evils which injuriously affect the community as a whole very little, or may even affect it momentarily for good.

II.—THE PRESENT CONDITIONS.

WE come then to the facts of the existing depression, which appears to date from about the end of 1882 or beginning of 1883. Just before that date there had certainly been a period of fair prosperity and rising prices, though a comparatively short one. In 1879 a period of depression which had been more or less marked since 1873 all at once came to an end. There was a general "boom" in the produce markets

and a recovery of tone in business which continued for two or three years. The total value of imports and exports, which had fallen from 682 millions sterling in 1873 to 612 millions in 1879, almost altogether owing to the fall of prices, rose in 1880 to 697 millions, and in 1883 to 732 millions—the foreign trade of the latter year, measured by quantities, being the largest on record. The entries and clearances of shipping in the foreign trade, which had been stationary at about 50 million tons for several years before 1879, though there was a sensible increase as compared with 1873 (thus showing, by-the-way, that the apparent falling off in the foreign trade between those two years was exclusively in nominal values), also increased very rapidly after 1879. In 1880 the total was about 59 million tons, and in 1883 it was 65 million tons. The receipts from railway goods traffic, again, which had been stationary for several years before 1879 at about 33½ millions sterling, rose to nearly 36 millions in 1880, and nearly 39 millions in 1883. The production of pig iron, which had ranged between six and seven million tons for several years before 1879, and was in 1879 at the lowest figure, rose in 1880 to nearly eight million tons, and in 1882 to 8,600,000 tons. Similarly, the production of coal rose from 134 million tons in 1879 to 147 million tons in 1880 and 156 million tons in 1882. Pauperism exceptionally increased in 1880 as compared with 1879, it being not unusual for the results of good trade in diminishing pauperism and increasing general consumption not to tell all at once, but the increase was very slight, and in the following years there was a moderate diminution. The consumption per head of tea and sugar, though not of spirits, also increased rapidly after 1879, as compared with the years just before that date. But at the end of 1882 or beginning of 1883 the aspect of affairs changed. Prices began to fall; production and foreign

trade fell off; since the present year (1885) began pauperism also shows a tendency to increase. It is since 1883 that we have had a steady outcry from the market-place about depression which has been echoed and re-echoed in political circles in a somewhat unintelligent manner, with more than usual emphasis laid on the assumptions, so common at such times, that depression is itself an uncommon and bewildering phenomenon, instead of being the most natural thing in the world, and that the present depression is the worst on record, and the beginning of the end of English industrial greatness.

In spite of these assumptions, it cannot really be disputed, when we come to look into the facts, that the present depression is in no way distinguished from many which have gone before by any exceptional severity. The gloom may be greater, for reasons to be afterwards discussed, though this is doubtful; but the actual diminution of employment for labour and capital, as far as matters have yet gone, is no greater as compared with the previous maximum than has often been experienced. Thus, in the foreign trade, imports and exports have fallen from 732 millions in 1883 to 686 millions in 1884—a reduction of about 6 per cent. An additional falling off is in progress in the current year; but, allowing for the fall of prices, the reduction in business done appears to be quite inconsiderable. The entries and clearances of shipping in 1884 only fell off by a fractional amount as compared with the high maximum of 1883; and in the current year, as far as it has gone, the figures of 1884 are fairly well maintained. The goods traffic of our leading railways again fell off in 1884 about $1\frac{1}{3}$ per cent. as compared with 1883. In the present year there is an additional falling off; but the variation is still only by a small percentage, and is partly the result of a reduction of rates, and not wholly a reduction of business done. Allowing for some signs of improvement

which are now apparent, it seems not unlikely that the falling off to be recorded for the whole year will be very small indeed. The production of pig iron, again, which was still at its maximum in 1883, or about $8\frac{1}{2}$ million tons, only shows a falling off in 1884, according to the best estimates published, to about $7\frac{3}{4}$ million tons, as high a figure as in 1880, which was a year of considerable prosperity, and very much higher than in the inflated years of 1872 and 1873. As regards the production of coal, there are yet no official figures, but it seems doubtful whether there has been more than the slightest falling off. The consumption of raw cotton, which was at a very high point in 1883, has also remained at that level; while the consumption of wool in 1884 was about as high as in any year on record, if not considerably higher. The consumption of copper, lead, and other metals, as well as of the raw materials, of manufactures generally, also remained at a high point in 1884, and still remains large. The consumption of sugar and tea was likewise even larger in 1884 than it had been in the maximum year, 1883. So far as the real facts go, therefore, there is nothing to indicate a considerable diminution in the employment for capital and labour during the present depression. Exceptionally in the shipbuilding trade, production has greatly declined as compared with the previous maximum. The ships built in 1884* were about 500,000 tons only as compared with 769,000 tons the previous year. It seems doubtful whether in the current year [1885] the figures of 1884 will be maintained. But the maximum from which this decline takes place was itself unprecedented, while shipbuilding has long been a variable trade. Large as the variation is, moreover, and large as the shipbuilding industry itself is, it remains true that the variation for the

* Exclusive of ships built for foreigners.

worse at the present time in the aggregate industry of the country, of which shipbuilding, large as it is, is really only a small part, is singularly small. As far as ordinary tests go, we must still speak, even in these times of depression, of the great prosperity of the people of the United Kingdom. Seeds of decay may have been sown which will ripen in time. The prophets of approaching ruin may be right in pointing to this and that symptom as alarming. But the industrial machine, as yet, seems all but fully employed, with the result that production, consumption, and saving are all on a large scale. The depression, like other depressions in past times, keeps within narrow limits.

But while the facts stated are beyond dispute, the fact of rather more outcry being made than usual remains to be accounted for and explained. The explanation I have to suggest is the condition of prices for many years past. But for the facts as to prices which have to be noticed, I should be disposed to say that the present depression would perhaps hardly be noticed at all as a depression. Comparing it with former periods, it is easy to see that it possesses no very marked feature. Usually a great depression succeeds a great period of inflation. In 1867 and 1868 the country was liquidating a great deal of bad finance in connection with the formation of limited companies and the construction of contractors' railways. From 1873 to 1879, though the depression of that period was aggravated by other causes, there was a similar liquidation of the bad finance of foreign loans which had been accumulating for twenty years before. At the present time there is no such liquidation going forward. In the few prosperous years which succeeded 1879 there was a slight boom on the English Stock Exchange and in shipbuilding; a still stronger inflation in the United States from which in turn there has been a greater reaction than any-

thing witnessed in this country, though the inflation and reaction even in the United States are both smaller than on former occasions; and a considerable mania on the Paris Bourse, which came to a disastrous close in 1882. But, taking the world of business all in all, there was in 1883 no such accumulation of bad business all round, and in connection with such special mischief as the foreign loans craze, as there has often been in previous periods of inflation. The progress of a period of inflation to its usual term appeared, in fact, to be arrested in 1882; and just as the inflation was less marked than usual, so the present reaction exhibits hardly any reduction in the amount of business done. If there were not some special reason such as I believe to exist in the condition of prices, the present period would hardly appear to be one of depression at all. It would be described at what it really is, a period of "marking time" in a new development of industry which commenced at the close of the long depression which ended in 1879. That depression itself involved a much smaller variation in the production of the country than it has been the fashion to represent; but the improvement and retrogression which has since taken place are both on a very different scale from those which went before.

What has happened, however, at the present time is a very special decline of prices. A fall of prices, as already stated, is a usual feature in every depressed period, and accentuates and very largely creates the depression. If, then, there has been an unusual fall of prices of late, no matter from what cause, an unusual amount of gloom is very easily accounted for. That there has been such a fall, and that for a long time past the course of prices has been such as specially to affect trade and to diminish the appearance of inflation at one time and to aggravate depression at another, is not difficult of proof.

The facts as to the most recent decline of prices are stated in the "Commercial and Financial History of 1884," given by the *Statist* in January 1885, as follows:—

"The conspicuous feature of the year, and the cause of its unprofitableness as far as wholesale merchants and manufacturers are concerned, has undoubtedly been the remarkable fall of prices which has taken place. Low as was the range of prices at the time when we wrote a year ago, the fall of the past year not only brought down that range of prices temporarily, but seems to have brought it down in a lasting manner, the low range having now continued for several months. We cannot do better than go over the list of articles in our Tabular Appendix.

"Beginning with iron, we find that Scotch pig iron warrants, which were 43s. 4d. in January last, have fallen to 42s. 3d. in December, the price of 41s. 2d. having been touched at the end of June, and even a somewhat lower figure than what appears in the table having been quoted. This price of 42s. 3d. in December compares with what we noticed as the very low price of 47s. 6d. in January, 1883. Similarly Middlesbro' No. 3 pig iron, which was 42s. 6d. in January, 1883, and 37s. in January, 1884, was only 35s. 6d. in December. Staffordshire bars, which were £7 17s. 6d. in January, 1883, and £7 12s. 6d. in January, 1884, were only £6 10s. in December. Welsh bars (Wales), which were £5 17s. 6d. in January, 1883, and £5 6s. 9d. in January, 1884, in December last year were only £5 2s. 6d. Copper (Chili bars), which commenced in January, 1883, at £65 per ton, had fallen to £56 12s. 6d. in January, 1884, and in December was only £48 per ton. This last price, it is noticed in the trade circulars, is not only about 12 per cent. lower than the lowest price upon record previously, but 30 per cent. lower than the lowest price at which it used to be considered that the article could profitably be produced. Straits tin, which was £92 15s. per ton in January, 1883, and £84 12s. 6d. in January, 1884, in December was £75 only, the price of £73 15s. having been touched in October. Tin-plates, which were 21s. 6d. per box in January, 1883, and 21s. in January, 1884, in December were 19s. only. Lead, which was £13 12s. 6d. per ton in January, 1883, and £12 7s. 6d. in January, 1884, was in December £11 6s. 3d. only, the price of £10 17s. 6d. having been touched in September. In coal, amongst the important metals and minerals, there is exceptionally hardly any change; but generally it may be said that there is at least a fall of 10 to 15 per cent. during the past year in these leading articles, and a fall of nearly 20 per cent.—in some cases of more than 20 per cent.—if we extend the comparison for two years.

"In chemicals there has been a steady fall for the year. Bleaching

powder, from 10s. 7½d. per cwt. in January, fell to 7s. 10½d. in December; saltpetre, from 24s. 3d. in January to 22s. 6d. in December; and soda, from £3 14s. per ton in January, to £2 15s. 9d. in December. In these cases, however, the fall to some extent has only been the loss of an advance which took place in the previous year, although the range is still comparatively low. In dyes and oils, particularly linseed oil and petroleum, there is also comparatively little change for the year, although the range of prices, it must be understood, is somewhat low. In other articles, however, there is a decided fall.

"Coming to textiles, we find the changes, as already stated, less marked. In cotton there has, in fact, been hardly any change of more than a fractional kind for nearly two years, the price commencing at 5½d. per lb. in January, 1883, and ending at 5½d. per lb. in December last, the highest price recorded in the interval being 6½d. in May, 1884, and the lowest price 5½d. in July, 1883, and October, 1884. The price of yarn manufactured has also varied very little, beginning at 9½d. in January, 1883, and also ending at 9½d. in December last. In wool likewise there has been very little change, the prices of the different kinds of wool, as will be seen from the details in one of the trade reports subjoined, having varied in different directions. The range of prices in wool, it must be understood, is comparatively low. In jute, where a year ago some recovery had taken place from the extremely low prices which had ruled in 1883, that recovery being to £16 10s. per ton, there has since been a decided fall, the price at the close of the year being only £12 15s. per ton. In silk there has also been a somewhat heavy fall during the two years—namely, from 16s. 4½d. per lb. in January, 1883, to 15s. 3d. per lb. in January, 1884, and 13s. 3d. in December last.

"Turning next to the chief articles of food, we find that the fall has been very severe indeed. The *Gazette* average price of wheat, which was low in January, 1883, at 40s. 4d. per qr., was only 38s. in January, 1884, and in December was 31s. 5d. only, even somewhat lower figures having been touched during the autumn months; good red English wheat, weighing 63 to 64 lbs. per bushel has, in fact, been sold during the year at a price lower than the *Gazette* average—namely, at 29s. per qr. Similarly, the price of red wheat per bushel in New York has fallen from \$1.18 in January, 1883, to \$1.5 in January, 1884, and 86c. in December, the quotation of 83½c. being actually recorded in November. Maize in New York began at 71½c. per bushel in 1883, and fell to 60c. in January, 1884, and 50c. per bushel last November, recovering in December to 56c. per bushel. In barley and oats the fall is somewhat less, but still there is a slight fall. In bacon there is a fall from 69s. per cwt. in January, 1883, to 67s. in January, 1884, and 63s. in December last. In coffee there is a fall from 77s. 6d. in January, 1883, and even

higher figures during 1883, to 75s. in January, 1884, and 67s. 6d. in December last. In tea during the past year there is apparently a rise from 5½d. per lb. in January to 6d. in December, these prices being higher than those of 1883, but being still a comparatively low range of prices. In sugar the greatest decline has occurred, the decline being, in fact, almost unprecedented in regard to any article of produce. The price of good refining West India was 20s. per cwt. in January, 1883—a low price; but in January, 1884, it was only 16s. to 16s. 6d. per cwt., while the price in December last was only 9s. 9d. to 10s. per cwt. Similarly, beetroot sugar has fallen from 19s. 4½d. per cwt. in January, 1883, to 10s. 3d. per cwt. in December last.

“The remarkable feature about these declines in price, it cannot be too often repeated, is the fact that they have occurred after a range of prices had already been established which was so low as to excite a great deal of remark.”

It is clearly unnecessary to assign any other cause for the gloom of the last year or two. Given a fall of prices like what is here described, arising from any external cause whatever, “depression” must ensue. In point of fact, there have been serious losses and failures among the capitalist classes, whose outcry gives the cue to public discussion on such questions. As already explained, these classes are poorer in consequence of such a course of prices as is here described, while they feel themselves poorer than they really are.

The point to which I would now draw special attention is that mentioned in the last paragraph of the above quotation. The most disastrous characteristic of the recent fall of prices has been the descent all round to a lower range than that of which there had been any previous experience. It is this peculiarity which more than anything else has aggravated the gloom of merchants and capitalists during the last few years. Fluctuations of prices they are used to. Merchants know that there is one range of prices in a time of buoyancy and inflation, and quite another range in times of discredit. By the customary oscillations the shrewder business people

are enabled to make large profits. But during the last few years the shrewder as well as the less shrewd have been tried. Operations they ventured on when prices were falling to the customary low level have failed disastrously because of a further fall which is altogether without precedent. Similarly landowners and other capitalists who are usually beyond the reach of fluctuations have had their margins invaded; rents, which rose so steadily for twenty years before 1873, have consequently fallen heavily; the change is more like a revolution in prices than anything which usually happens in an ordinary cycle of prosperity and depression in trade.

Hence the special connection I have ventured to suggest between the present depression of trade and low prices. But for the low prices, there is not only nothing remarkable about the present depression, but it is even less marked than most depressions on record by characteristics of severity and duration. The low prices, however, are most striking, and have sufficed to draw to it attention and discussion of a most unusual kind and degree. The question of the low prices themselves, their origin and probable continuance, and the various consequences that may ensue, thus becomes in turn, in my opinion, the question of most interest arising out of the present depression. It is no longer a side issue incidental to the problem of the depression itself. The effect of the prices on the depression becomes interesting mainly by way of illustration and as part of a topic of wider and more general interest.

III.—THE HISTORY OF PRICES.

A MORE extended examination of the facts fully confirms the impression that prices of wholesale commodities have lately fallen far beyond a customary low level. To appreciate fully what has happened, it is necessary, indeed, to look more closely at the facts, and follow the movements of prices, not only of late years, but over a very considerable period.

Let us look first at the direct evidence as to the recent fall being in every way unusual. In 1879, in a paper read before the Statistical Society, discussing the fall of prices which had then taken place, I produced a short table, which may be usefully continued to the present date. We may read clearly in it how great has been the descent lately as compared with what it was even in a year like 1879 :—

PRICES OF LEADING WHOLESALE COMMODITIES IN JANUARY, 1873,
1879, 1883, AND 1885, COMPARED.

	1873.	1879.	1883.	1885.
Scotch pig iron, per ton	127s.	43s.	47s. 8d.	41s. 9d.
Coals, per ton	30s.	19s.	17s. 6d.	18s.
Copper, Chili bars, per ton	91l.	57l.	65l.	48½l.
Straits tin, per ton.....	142l.	61l.	93l.	77½l.
Wheat, <i>Gazette</i> average, per qr. ...	55s. 11d.	39s. 7d.	40s. 4d.	34s. 11d.
„ red spring, at New York, { per bushel	\$1.70	\$1.10	\$1.18	91c.
Flour, town made, per sack.....	47s. 6d.	37s.	38s.	32s.
„ New York price, per barrel	\$7.5	\$3.70	\$4.30	\$3.25
Beef, inferior, per 8lbs.....	3s. 10d.	2s. 10d.	4s. 4d.	4s.
„ prime small, per 8lbs.	5s. 3d.	4s. 9d.	6s.	5s. 4d.
Cotton, mid. upland, per lb.	10d.	5½d.	5½d.	6d.
Wool, per pack	23l.	13l.	12l.	11l.
Sugar, Manilla musca, per cwt. ...	21s. 6d.	16s.	16s. 6d.	10s.
Coffee, Ceylon, good red, per cwt.	80s.	65s.	78s. 6d.	71s.
Pepper, black Malabar, per lb.....	7d.	4½d.	5½d.	8d.
Saltpetre, foreign, per cwt.	29s.	19s.	19s.	15s. 3d.

Thus, in hardly any case was the price in January, 1885, higher than it was six years before, and while in those cases

the price was not much higher, cotton being the most prominent example, the price in several instances is notably lower. In wheat the fall is very marked, and also in sugar and copper. Another peculiarity is that the intermediate improvement in price between 1879 and 1885, as shown by the quotation for January, 1883, is only to a point very much lower than in 1873, which was the starting-point of the table. To take the first item in the list, pig iron, which fell from 127s. in 1873 to 43s. in 1879, only rises in 1883 to 47s. 8d.—a somewhat higher price, which was touched for a short period after the low price of 1879, being still far short of the price quoted for 1873, which was itself much under the highest point of the inflation of that period. Similarly, copper, which was £91 per ton in 1873 and fell to £57 in 1879, only rises in 1883 to £65, to fall in 1885 to about £48. Wheat in like manner falls from 55s. 11d. in 1873 to 39s. 7d. in 1879, and only rises to 40s. 4d. in 1883, to fall to 34s. 11d. in 1885. Cotton falls from 10d. per lb. in 1873 to 5 $\frac{3}{8}$ d. in 1879, and has only risen since to 5 $\frac{1}{8}$ d. in 1883, and 6d. in 1885—a very immaterial rise from the lowest point of 1879, though in this instance, as already noticed, the price in 1885 is somewhat higher than in 1883. Thus, we have not only the fact of a descent to a lower range of prices in the present depression than in 1879, but the fact that in the intermediate period of good trade and rising prices the ascent was very far short of the high level which had been reached in 1873. In other words, the minimum prices of the period through which trade has passed since 1879 are not only lower than the minimum prices of the previous period, but the maximum prices are also lower than the former maximum. The oscillations are altogether at a lower level. This is another way of putting the fact that merchants and capitalists have lately encountered a descent of prices below

the customary level, which has greatly put them out and involved them in fresh and most unexpected difficulties. The minimum of the former period has almost become the maximum of the new, and operations based on the former customary levels have failed.

Taking a still more extended view of the subject, there seems no small reason to believe that, whatever may be the cause, the course of prices in the wholesale markets has of late years taken a decided turn. There is at least some evidence that, for fifteen or twenty years after 1845-50, prices on the average tended to rise from period to period; from about 1860 to 1873 they were comparatively stationary, oscillating between the higher maxima and minima which had come to be established; and since 1873 the tendency has been downward, the oscillations now being much the same as before 1850, if not at a somewhat lower level. The evidence is a little intricate and technical for popular statement; but it cannot be wholly passed over. It is brought to a point by the use of what are called "index numbers," which Mr. Jevons was the first to use on a comprehensive system. Instead of dealing with isolated prices, it is possible by means of assigning a certain value, say 100, to a particular article, and calculating the rise or fall from a given date on that value, and then combining a number of articles treated in a similar manner, to bring out the average rise or fall of the group. If the articles selected to form the group have an original value assigned to them at all proportioned to their importance in the general transactions of commerce, then the average rise or fall in the group should correspond approximately to the average rise or fall in the leading articles of trade.

Among the best known of these index numbers is that used by Mr. Newmarch in the annual commercial history of

the *Economist*. In the paper I wrote in 1879, already referred to, I made use of this index number to show the real magnitude of the fall in the latter year, and to illustrate some points in the course of prices over a long period to which I am now drawing attention, and this index number may also be repeated here with a continuation to the present date.

1845-1850	2,200	1874	2,891
1857	2,996	1875	2,778
1858	2,612	1876	2,711
1865	3,575	1877	2,715
1866	3,564	1878	2,554
1867	3,024	1879	2,202
1868	2,682	1880	2,538
✓ 1869	2,666	1881	2,376
1870	2,689	1882	2,435
1871	2,590	1883	2,342
1872	2,835	1884	2,221
✓ 1873	2,947	1885	2,098

From this it will be seen that, while the average prices of 1845-50 were represented by the index number 2,200, the minimum ten years later—viz., 1858—was 2,612, and the maximum, in 1865, was 3,575. In 1868-69, the next depressed period, the figure is still higher than in 1845-50, being just under 2,700, and in 1873, the next inflated period, the maximum is 2,947—lower than in 1865, but much higher than the average of 1845-50. In 1879, however, the figure is almost exactly the same as the average of 1845-50—viz., 2,202; while the highest point touched since is 2,435, in 1882, a much lower figure than in either 1865 or 1873, and the minimum at the beginning of the present year is 2,098, or about 5 per cent. less than the average of 1845-50. The course of this index number thus corresponds very closely with the general movement of prices already indicated—an ascending movement after 1845-50 down to about 1860-65, a high level of prices from that date to 1873, and

since 1873 a descending movement ending in a return to the low level existing in 1845-50, and in fact, to a somewhat lower level. The correspondence would have been still more close but for the fact of this index number appearing to contain a disproportionate number of articles depending on the price of raw cotton. But for this, the figures from 1865 to 1873 would not have been quite so high as they were, and there would have been a smaller fall between those dates than what the figures appear to show.

The next index numbers I shall use are those contained in Parliamentary Reports on the Prices of Imports and Exports which were compiled at the Board of Trade under my direction.* According to these, as regards the exports, prices have not been so low since 1840 as they are at the present time. The index number of 65·8 falls to be increased or diminished in the years undermentioned since 1840, as follows:—

Year.	Increase.	Decrease.	Year.	Increase.	Decrease.
1840 ..	13·34	.. ..	1859 ..	0·40	.. ..
1841 ..	10·95	.. ..	1865 ..	23·46	.. ..
1845 ..	6·05	.. ..	1868 ..	11·42	.. ..
1848 ..	.. ..	2·43	1873 ..	19·93	.. ..
1849 ..	.. ..	5·29	1875 ..	8·67	.. ..
1852 ..	.. ..	6·47	1876 ..	2·25	.. ..
1853 ..	.. ..	1·14	1877 ..	.. ..	0·40
1854 ..	.. ..	0·95	1879 ..	.. ..	6·10
1855 ..	.. ..	2·75	1881 ..	.. ..	6·26
1857 ..	0·77	.. ..	1883 ..	.. ..	5·95

This table, unfortunately, cannot yet be brought down later than 1883, but it shows as strikingly as the previous table the higher range of prices from 1865 to 1873 than there was about 1850, and the descent which has taken

* See C. 2247, Sess. 1879; C. 2484, Sess. 1880; C. 3079, Sess. 1881; and C. 4456, Sess. 1885.

place since 1873 to the level of 1850. As the prices of the exports in 1884 were undoubtedly lower than in 1883, there can be no doubt, when this table is continued, of what the evidence will be.

Similarly, as regards the imports, the index number of 81.16 falls to be increased or diminished as follows :—

Year.	Increase.	Decrease.	Year.	Increase.	Decrease.
1854	..	0.80	1876	..	3.61
1855	.. 3.51	..	1877	..	1.48
1857	.. 7.08	..	1878	..	7.04
1859	..	1.39	1879	..	10.30
1865	.. 13.59	..	1880	..	6.39
1868	.. 5.73	..	1881	..	6.99
1873	.. 4.43	..	1883	..	9.43
1875	.. 0.25	..			

It is, unfortunately, impossible as regards the imports to go back beyond 1854, as there were only official prices before that date, but it is at least evident that the level of prices which existed after 1860 down to 1873 has not been maintained. The level of prices on the average reached by the imports does not seem to have been so high as that reached by the exports, but the descent has been to a somewhat lower level. The general movement has been the same.

The evidence is thus cumulative as to what the course of prices has been since 1850, and as to the general course having been very different since 1860–73 than it was before. Not only does the index number prepared by Mr. Newmarch many years ago, and without any possible foresight of existing controversies, support this view, but index numbers based entirely on the actual proportions to each other of the different articles of our foreign trade bear testimony to the same fact. It is impossible to suppose that any other index numbers which could be impartially constructed would yield

any other result. Every important article of commerce is included in them, and the oscillations of prices they respectively indicate synchronize in a striking manner.

IV.—THE QUESTION OF GOLD SCARCITY.

THE question then arises on these figures whether the depression at a time like the present may not be largely due to some permanent cause which has lately begun to operate ; to which trade was not subject for many years after 1850, and which is now in full operation ; and which has for its effect to prevent a rise of prices in good years to what was long considered the customary maximum, and to precipitate a fall in bad years to a point much below the customary minimum. That the answer must be in the affirmative appears to be very clear. There is no mystery at all about the actual course of prices, while the effect of the recent changes in diminishing the profits of capitalists, because the upward movement of prices is less than they expect, and the downward movement greater, is equally palpable. Merchants and capitalists all round have suffered. They have held stocks longer, or bought stocks sooner, than they would have done if they had not to some extent lost their bearings. Their gloom is great, because prices are obstinately low. Whatever may be the cause of so great a change, it is surely worth investigation.

Two causes only have been suggested. One is a great multiplication of commodities and diminution of the cost of production due to the progress of invention, improved facilities of communication, lower freights, international telegraphy, and the like circumstances. The other is, that

the precious metal used for standard money—viz., gold—has become relatively scarcer than it was, its production being diminished on the one hand, and the demands for it on the other hand increased. The former of these causes was discussed quite lately by Mr. Fowler, in the *Contemporary Review*, and a greater weight assigned to it than to the latter cause. I am disposed to give the greater weight to the latter. To a large extent, however, the two causes are not in conflict. The question is of money prices—the relation of money to commodities. Whether it is commodities that multiply, or gold that diminishes or does not multiply in proportion, the relation between gold and the mass of commodities is equally changed. It is quite conceivable that if gold were to increase in quantity and its cost of production to diminish, as other commodities increase in quantity and have their cost of production diminished, there would be no change of any kind in gold prices. Commodities would be more abundant, but the abundance would make itself felt in a rise of money wages, salaries, rents, and profits, and not in lower prices. That it is felt in lower prices now appears to be absolute proof that the relation between gold and commodities has changed, that they have not increased in quantity and had their cost of production diminished *pari passu*. In addition, however, while not denying that there has been a change on the commodities side of the balance, I would go farther and maintain that what has happened to gold in the way of diminished production and increased demands upon it, arising from other causes than the multiplication of commodities, must have had great effect.

The evidence can be stated very briefly, and I am the less disposed to go into it as it is described at some length, as far as the facts were known at the time, in the paper on the fall of prices written in 1879, to which reference has already

been made. The new facts since that date, however, have fully confirmed what it was only possible then to anticipate.

The initial fact is the diminution of annual production which has occurred since 1860 as compared with what it was immediately after the Australian and Californian gold discoveries. In 1852-56 the average annual production was about thirty millions sterling; in 1857-61 it was twenty-five millions; in 1862-66, twenty-three millions; in 1867-71, twenty-two millions; in 1871-75, nineteen millions; and since 1875 there has been no increase of production, but rather a decrease. It is impossible to suppose that no effect on prices was produced by the vast production thirty years ago, especially as that production had to be infused into a smaller mass than has the present production, so that the effect was all the greater. But for the substitution of gold for silver in France, which absorbed a large part of the new production, the effect on prices would have been much greater than it was. As matters stand, an actual rise of prices between 1850 and 1865 corresponded to the large new production of gold. It is equally impossible to suppose now that, along with a diminished production, prices could lately have gone up as they did after 1850.

We have next the facts as to the extraordinary demands for gold since about 1872. In that year the gold coinage of Germany commenced, and from first to last that operation has absorbed about 80 millions sterling. Writing in 1879 it was only possible to anticipate a new demand for the United States, whose return to specie payments in 1878 then threatened such a demand. But the demand for the United States has been fully up to the anticipation. The imports of gold into that country since 1878, less the exports, have amounted at least to 34 millions sterling—imports 55 millions, exports 21 millions—while the domestic production

in the same period, which has all been absorbed at home, has amounted to 48 millions. The total is 82 millions, or, in round figures, another extraordinary demand of 80 millions to be added to the German demand. There has been another extraordinary demand for Italy during the last few years, amounting to nearly 20 millions sterling, besides smaller demands for Holland and the Scandinavian countries. In round figures, therefore, there have been new demands in the last thirteen years for about 200 millions of gold, an amount very nearly equal to the whole production of the period, although a larger amount than the annual production of that period had been necessary in previous years to maintain the state of prices which then existed. As the maintenance of equilibrium in the matter of prices is only possible, other things being equal, by means of a supply of gold to meet the wear and tear of coin and the increase of the population using gold in numbers and wealth—and the ordinary demands of that kind before 1872, amounted in fact to 12 millions sterling annually—it is difficult to imagine how all these extraordinary demands could have existed without contributing to that change in the course of prices which we should have expected beforehand as the consequence, and which has in fact occurred.

In point of fact, there has been a material change, coincident with the fall of prices which has been described, in the consumption of gold in the coinage of the United Kingdom as compared with what it was when prices were at a higher level. In 1861–70 the annual gold coinage of the United Kingdom was about 5 millions sterling, the amount in 1871 being nearly 10 millions, and the amount in 1872 being just over 15 millions. The average of the period 1874–83 has been one and a half millions sterling only, while in 1881–82 there was no coinage at all; in 1879, £35,000 only was coined; in 1877, £981,000 only; and in 1875, £243,000 only.

The deficiency has been partly made up by an annual import of about £2,000,000 from Australia; but in any view the total consumption of gold in British coinage has been less than it was, whereas to meet the increase of population and wealth it ought to have been sensibly larger.*

The course of the money market has also been such, I believe, as to indicate a strain upon the supplies of gold. It is sometimes argued that if gold had been really scarce in the last ten or twelve years, the rate of discount and the interest of money would have been higher than they were when gold was relatively more abundant. Consequently, it is said that, as the rate of discount and the interest of money have been lower than they were, the evidence of the money market rather is that gold has not been scarce. Over long periods, however, the rate of discount and the interest of money do not depend on the scarcity or abundance of "money," using the term in its strict sense, but on the scarcity or abundance of capital relative to the demands of borrowers. There may be any conceivable rates of discount and rates of interest for money at any conceivable range of prices for commodities. The way scarcity or abundance of gold would tell upon the money market would be by producing momentary stringencies and periods of temporary difficulty and discredit, by which, perhaps, the tendency to inflation in prices at one time would be checked, and the tendency to depression at another would be aggravated. The average rates over the whole period when these stringencies were occurring might be lower than at times when they were fewer, but the mere fact of successive stringencies would help to produce the effect described on prices. Now, the course of the money market since 1871, when the German Government began to draw gold from London, has been full of such stringencies. The crises of 1873 and 1875 were no

* And see *postea*, p. 78.

doubt precipitated by them, and since 1876, in almost every year except 1879 and 1880, there has been a stringency, of greater or less severity, directly traceable to, or aggravated by, the extraordinary demands for gold and the difficulty of supplying them.

Looking at all the facts, therefore, it appears impossible to avoid the conclusion that the recent course of prices, so different from what it was just after the Australian and Californian gold discoveries, is the result in part of the diminished production and the increased extraordinary demands upon the supply of gold. It is suggested, indeed, that the increase of banking facilities and other economies in the use of gold may have compensated the scarcity. But the answer clearly is that in the period between 1850 and 1865, and down to 1873, the increase of banking facilities and similar economies was as great relatively to the arrangements existing just before as anything that has taken place since. The same reply may also be made to the suggestion that the multiplication of commodities accounts for the entire change that has occurred. There is no reason to suppose that the multiplication of commodities relatively to the previous production has proceeded at a greater rate * since 1873 than in the twenty years before that. Yet before 1873 prices were rising, notwithstanding the multiplication of commodities; and since that date the tendency has been to decline. The one thing which has changed, therefore, appears to be the supply of gold and the demands upon it; and to that cause largely we must accordingly ascribe the change in the course of prices which has occurred.

The final test would be whether wages, rents, and profits were also falling. The community, as we have seen, may benefit in one of two ways by the abundance and multiplication of commodities—by a rise of wages, profits, and rent,

* Or rather at a much greater rate.

the different forms of the return to labour and capital, while money prices remain the same ; or by a fall of prices while money wages, profits, and rent are maintained, or at least do not fall in proportion to prices. If prices have fallen, therefore, on the average, we should not expect the same rise in wages or in the return to capital as took place when prices were rising. The facts are unfortunately too recent to enable us to illustrate this point, but there are not wanting signs that this final test will be met. There has been no marked increase in the rates of wages since 1873, and there are now in all directions reports of strikes and lower wages ; rents are undoubtedly falling ; the income-tax assessments have increased more languidly since 1875 than they did for many years before ; the returns of property liable to legacy and succession duty, though these are most difficult to follow owing to the naturally great fluctuations, would also appear of late years to have been stationary or declining. The very things are happening which we should have expected to happen if there had been a pressure upon gold.

V.—CONCLUSIONS.

IF the facts are at all as has been stated, we seem to be justified in one or two conclusions of no small interest. One is that we can hardly be sure yet that the causes of the recent change in the course of prices have fully worked themselves out. For the present,* the tide appears to have turned. Prices all round are somewhat higher than they were at the end of last year, and the state of the money market is such that a further rise may be supported without a stringency supervening. But we should still rather expect from period

* This was written in May 1885.

to period a tendency in prices to fall. The annual production of gold, not having increased for ten or fifteen years, but having, if anything, slightly diminished and tending still to diminish, is now even less in proportion to the whole stock in use than the annual production was to the stock in use ten or fifteen years ago. Population and wealth at the same time are increasing at even a greater rate than they did.

This last conclusion remains true, and applies, indeed, with all the more force, if we agree with those who attach more weight to the multiplication of commodities than to anything which has lately happened to gold. It is easy to see that, if the extraordinary changes in relation to gold have counted for anything in the recent course of prices, then the changes of prices yet in store, though they may continue in the same direction, may not be quite so violent as those which are past. But if these extraordinary changes in relation to gold count for little, then the prospect as regards the future is that of a more rapid and violent fall in prices than anything which has yet occurred. The multiplication of commodities goes on with ever-increasing intensity, according to the best authorities. An average fall of prices from period to period must be the inevitable consequence, and, if the recent fall has not been aggravated by something which has happened in relation to gold, we must expect very great changes in prices indeed. Attaching great weight myself to the pressure on gold, I look for more moderate changes in average prices in the future than those which have lately occurred; but those who argue against giving weight to the scarcity of gold are shut up to the expectation of rather serious changes. That the course of prices is on the whole likely to be downwards in future, the upward course after 1850 having only occurred by way of exception to the general rule, may at least be admitted. It depends in part

on a peculiarity of the precious metals in relation to the cost of production. There is an intrinsic difficulty in the way of an increase of a standard metal used as money proportionate to the increase of the commodities which it moves. As the latter are renewed incessantly, an increase of the means of production increases the whole mass on the market at any given time. As the precious metals in use, however, exist in masses enormously greater than the whole annual production, an increase of the means of production equal to what takes place in other commodities only means, in the case of gold, an increase of a fraction of the whole mass in use. There is, accordingly, a permanent tendency to change in the relation of commodities to gold. If this tendency is aggravated at any moment by a diminished production of gold itself and a special strain upon its use, the effect on prices will be aggravated, and changes of prices like what have been lately seen will be less surprising; but without this aggravation the permanent tendency seems necessarily downwards. The increase of the means of production, in order to keep the supply of gold proportioned to that of commodities, should be at a greater rate, and should be proportioned in some way to the mass of gold existing, and not to its annual production. But, in fact, the annual production of gold is maintained with difficulty, while that of all other commodities increases.

What will be the effects on trade in the future of such a course of prices as there seems reason to anticipate? I am disposed to conclude that there will probably be less inflation and less of the buoyancy and enterprise that accompany inflation than there would otherwise be; but there will also be less of the paralysis and disasters which attend great inflations, and trade generally will be sounder. There will be fewer ups and downs, but more quiet, patient, and steady industry.

There will, however, be more "depression" from time to time. Lower and lower prices must affect men's spirits, lessen money profits as compared with what they would be if prices were steady, and diffuse an impression that business is not going well. One year with another, I should expect in future much louder and more persistent expressions of discontent than there have been in the past. Reduction of money wealth, or even its slow increase, will be spoken of as if the real changes were the same.

For the students of economic history and statistics, the future problem is excessively important. The figures we shall have to deal with will be much more difficult than if circumstances were to favour steady and ever-rising prices as they did for many years after 1850. Owing to these circumstances changes in value in imports and exports, income-tax assessments, and the like figures corresponded fairly well from period to period with changes in the quantities of business done and of wealth. Of late years this has not been the case, the figures being already more difficult, and the difficulty will continue and increase. The aggregates of trade already can no longer be stated without allowances for differences of price. What the difficulty may become over a long period may be perceived by reference to the past. From 1805 to 1820 the declared values of our exports ranged from about 36 to 45 millions sterling annually, the total of nearly 52 millions being reached in 1815. No higher totals were reached for many years after, and it was not till 1836 that the high total of 1815 was surpassed, and not till 1840 that the figures were steadily higher. All the while the quantities of goods moved in the foreign trade were increasing, the entries and clearances of shipping being in 1836 about 7 million tons, or almost exactly double the tonnage at the beginning of the century. Similarly, the income-tax assess-

ments of 1843 showed a very moderate increase upon those of 1815, nearly thirty years before, and it was not till 1850 that they began to increase by leaps and bounds. Those who are interested in economic statistics should accordingly be prepared for future difficulties of a kind which hardly existed for many years after the Free Trade period commenced. This question of prices affects deeply almost every problem of economic history.

The question will not fail to be asked—Ought nothing to be attempted to alter the course of events which is thus anticipated? According to the opinions already expressed, there is certainly no need to do anything. If trade on the whole will be sounder and industry steadier under a *régime* of slowly falling prices than it would otherwise be, it will be as well to let things alone. But it is almost certain that, under the circumstances anticipated, currency-mongers will come to the front, as bi-metallists are already to the front. Pushing, active men of business find slowly falling prices intolerable, and, speaking of it as an evil, they can hardly fail to raise the sort of questions which were raised and hotly discussed for many years prior to the Bank Act of 1844. It would be out of place to discuss by anticipation any of the projects which are not unlikely to be put forward. I would only point out that if there is any truth in the account of the question here given, the remedies proposed by bi-metallists, or by authors of schemes for inconvertible paper, apart altogether from the objections of principle to such remedies, will be wholly inapplicable to the evil, or alleged evil, to be cured. The essence of all such schemes is to prevent or mitigate a fall of prices, or to create a rise of prices by an immediate abundance of money. But the effect is necessarily transitory. The permanent causes of the scarcity of money in relation to commodities remain, and the momentary

abundance must be succeeded quickly by the same relative scarcity as before. The case against bi-metallists on this score is very strong. Gold and silver being equalised, assuming the bi-metallic scheme to be successful, the future course of prices will be regulated by the aggregate annual production, not of the one metal, but of the two. The proportion of that annual production to the stocks of the two in use is, however, much the same as the proportion of the production of the one metal to the stock of that metal only. The future course of prices will accordingly be much the same as if one metal only were used in a particular country. The multiplication of commodities out of all proportion to the increased means of production of the precious metals will go on, and falling prices will inevitably result. *

My remarks have already gone to so great a length as to leave me little space, even if the topics would have come into the frame of my article, for the discussion of other alleged causes of the existing depression, and the remedies for it. But I may be permitted one or two observations. The principal of these alleged causes are the foreign bounty system, the protective tariffs of foreign countries, and foreign competition; and the corresponding remedies are countervailing duties, duties on foreign manufactures imported into this country without any corresponding excise duties on articles manufactured in this country, and various schemes of imperial and colonial confederation, coupled or not coupled with differential duties on the imports of colonial products. As regards all such causes and remedies, what has already been said should help to show that the causes can neither

* See my paper read at the Bankers' Institute, May, 1866, "On some Bi-Metallic Fallacies," for a fuller discussion of this point.—
[Note to Second Edition.]

have much to do with the depression nor will the remedies at all apply. What they have to do with is rather the more permanent conditions of the country's trade, than the fluctuations of inflation and depression, which are necessarily transitory in their nature. It is easy to show, moreover, that the alleged causes can have little to do with the existing state of things as compared with a cause like low prices, or with the more general causes of depression, which always exist, and which make depression follow prosperity as night follows day. Bounties, protective tariffs, and foreign competition have all been in existence for a score of years and more in as aggravated a form as they are now. Even before 1873, which was a period of almost unparalleled inflation, bounties, foreign tariffs, and foreign competition were all the subject of complaint. Forty and fifty years ago they existed in a very intense form, the foreign tariffs at least being higher than they have since been or are now. But trade has had its ups and downs irrespective of them, and as it has been in the past so we may be sure will it be in the future. Our welfare does not depend on any external causes, or on any injury which it is in the power of foreign governments to inflict, but on our own industry and energy. If our trade is diverted at all by external causes, it will find other channels, so long as the will and determination to use our great resources of capital and organised labour exist. It is obvious, besides, that an alleged cause of trade depression like foreign bounties is so infinitesimally small in itself as to make it simply astounding that it should ever be cited in this connection at all. The only bounty as yet seriously complained of is that on sugar-refining. But, while the amount of sugar-refining at home has rather increased in the last twenty years, it is found, when the facts are looked at, that the whole return to labour and capital employed in this particular trade is only two or

three millions per annum, as compared with aggregate earnings by the whole country of 1200 millions and more. How can the up or down in so small an industry have anything to do with general trade depression, in which even a fluctuation of one per cent. would diminish or increase the earnings of the community by many times the amount of the earnings of this one trade? It is the same to a less degree with the trades affected by foreign tariffs or foreign competition. Changes in these factors only affect a portion of our total trade, whose main stream is hardly influenced by them in comparison with what other causes effect. As a consequence, the special remedies proposed to meet bounties, tariffs, and foreign competition, apart from all objections to them on other grounds, would not mitigate the depression one iota, or prevent the recurrence of depression some other time. The causes of ups and downs in trade and the permanent causes of low prices which have been described would remain what they are, and the consequences would also be the same, if they were not aggravated by the specially mischievous character of the attempted remedies.

Meanwhile, it is not unpleasant to recognise that there are one or two signs of the present depression passing away. In the United States, where matters happen to have been worse than they are here, the traffic of the railway companies has begun once more to increase. This is an excellent sign. Prices all round, as already noticed incidentally, have also begun to pick up, sugar and many other commodities being all appreciably higher than they were some months ago. According to all experience, a period of low prices like that through which the country has been passing is invariably good for trade. The masses of the community save more with low prices than they can do at other times, and these savings in time furnish an additional demand for commodities

and additional employment for labour and capital by means of permanent investment. A reaction upwards is thus inevitable before long. We should be surer of the immediate future if wages had fallen more than they have done—if, in other words, the adjustment of money wages to the lower prices of commodities had been more complete in all directions than it has been. It is difficult, however, to measure the precise degree of adjustment required, and the signs point rather for the present to a speedy recovery in trade than to a postponement of recovery until fresh adjustments have been made in respect of the wages of labour and the means of production employed.* [1885.]

* The recovery has actually been slower, but for the last few months it appears to have become unmistakable.—[Note to Second Edition.]

II.

GOLD SUPPLY; THE RATE OF DISCOUNT, AND
PRICES.

IN various essays which I have written on such questions as "The fall of Prices of Commodities in Recent years,"* and "Trade Depression and Low Prices,"† I have assumed that variations in the amount of the new gold supply from the mines are likely to influence materially the rate of discount, or, to speak more generally, the rate of interest in the short loan market of an industrial system like that of England. I have also assumed that this annual supply, and its proportion to the stock of the metal in circulation, in connection with the ordinary and extraordinary demands upon that stock, are material factors in any question of the level of general prices for commodities at a given time, and of alterations in that level. The connection between the annual gold supply and the rate of discount and prices, has indeed always appeared to me self-evident. As regards the rate of discount, the governing facts are that a banker requires to keep a certain reserve of cash in proportion to his deposits, and the rate of discount is determined in part by that reserve, while the replenishment of that reserve is in turn dependent, among other things, on the annual supply of gold from the mines. Clearly, then, the rate of discount must be dependent in some degree on that annual supply. As

* See "Essays in Finance," 1st Series, p. 311; cf. do. "The Depreciation of Gold since 1848," p. 82. † See the preceding Essay.

regards prices, again, it seems almost too plain for argument that as prices are the expression of a relation of quantity between commodities and gold, anything that changes either the amount of commodities or the amount of gold, "other things being equal," must affect them. Other causes besides mere amounts on one side or the other no doubt affect prices, and in the complexity of economic facts, the operation of a particular cause at a particular time may be difficult to trace; but the connection between quantities of commodities on one side and the quantity of gold on the other, and therefore the importance of any change in the demand for or supply of gold, consequently of any change in the supply of gold from the mines, appears altogether to be so plain as to be beyond dispute. I find, however, that propositions I believed to be axiomatic or almost self-evident are in fact disputed. It is contended that what settles the rate of discount is the relation between capital seeking employment on loan and the demand for accommodation by borrowers. The argument that the quantity of cash at a given time has anything to do with it is stigmatised as absurd and as a revival of the mercantile theory. It is also gravely contended that the quantity of cash has nothing to do with prices—that prices vary from a hundred causes, such as changes of credit, over-supply of special groups of articles, and the like, and that there is no room for such a cause as changes in the supply of gold or the demand for it, consequently no room for such a cause as a change in the supply of gold from the mines.

I propose in the present essay, therefore, to set out the reasons for the special importance of the supply of gold from the mines, in connection with the two questions stated, viz., the rate of discount and the level of general prices. As we shall see, the two questions are connected at some points. A change in the level of prices affects the money market. A rise tends to make "money" in demand and to raise discount

rates; a fall to make "money" abundant and to lower rates. At the same time a change in the discount rates acts on prices. A rise tends to lower prices; a fall to raise them. Prices in turn react on discount rates. There is incessant action and reaction. An exposition of the circumstances and degree in which these causes operate or are modified by other causes, will accordingly throw light on the general problems of the money market. The question is not merely one of the truth or falsity of the above general assumptions, but of the "how" and "wherefore" of their truth, the "how" and "wherefore" being in fact as interesting, if not more interesting, than the assumptions themselves. I propose, in addition, to re-examine the facts as to the present gold scarcity and see whether they are such as the exposition of the general question would lead us to anticipate. Is the present state of the money market and prices to be explained in part by an actual diminution of the gold production, and an increase of the extraordinary demands upon gold in recent years? *

I.—THE CONNECTION EXPLAINED.

IN a simple industrial system, a system that is without paper circulation, without deposit banks, without organised markets, and without an extended credit system, the questions would hardly arise. There is a familiar explanation as to how gold is directly distributed from the mines to other countries. Gold mining being the profitable pursuit in mining countries, the price of everything except gold is raised to a point there which will attract those other

* In the present Essay I speak of gold only. *Mutatis mutandis*, of course, what is said of gold would be true of any other metal used as standard money.

things from abroad. The attraction from abroad tends to raise prices in the countries more immediately connected with the gold mining countries; and so, by a succession of waves, if there is an excessive new supply of gold, general prices are raised throughout the world. The difference of price is the distributing agency, and the annual supply of gold is thus directly connected with prices. Clearly, if a certain annual supply is required, as *ex hypothesi* it must be, to keep pace with an increase of population and commodities, and so maintain prices in equilibrium, then a mere failure to maintain such supply will lower prices and an excess of supply raise them. The relation is instant and immediate, while variations in the cost of production, by diminishing the supply when cost increased, and increasing it when cost diminished, would also be felt very quickly. In the same way, though the point has not been explained that I know of, a direct connection between the annual supply of gold and the rate of discount, or rather the rate for loans generally, can be understood. In simple industrial systems, the amount of cash kept by capitalists is an unusually important item of that portion of capital known as circulating capital. It is out of this cash that loans are made, and when once parted with, the amount only returns slowly and by roundabout channels to the capitalist. Its abundance or scarcity thus affects directly the power of the capitalist to lend and the desire of others to borrow. In primitive societies, in fact, it is cash that is often borrowed and lent for the direct purposes for which cash is required, and not merely as the instrument of other operations, so that cash in the strictest sense of the word is capital.* In such communities, how-

* *E.g.* A nobleman wastes his property in riotous living and exchanges fixed property for cash. Or a king wants cash for a military operation

ever, capital is usually scarce and dear, and the effect of the gold supply on prices is so important as to obscure the effect of the same supply on the terms for loans. That there must be a direct effect, however, though relatively unimportant, is clear. A scarcity of circulating capital is usually in fact a scarcity of cash—cash being so important an item of the circulating capital which is borrowed and lent. The prices and the rates for loans are not, however, closely inter-connected in such a system. There is no action and reaction between them. The effects on them proceed directly from the same causes of scarcity or abundance.

In a complex industrial system, however, the connections which are so direct in a simple system are in some respects fundamentally altered and are altogether more difficult to follow out. The use of cash is economised in thousands of ways, and at the very time that its existence is almost hidden out of sight its potency is increased. First come bills of exchange, which are at once certificates of debt, and substitutes for cash. By means of these, remittances from place to place become possible without cash. Debts are exchanged and balanced by bankers and bill discounters and cash is economised. Next come issues of notes, whether by bankers or the State, which are also at the same time certificates of debt and substitutes for cash. Here again, whether the paper is convertible or inconvertible, cash is economised. The issuer keeps in cash in his till only a part of the nominal value that he issues, saving usually half or two-thirds of the amount. £50 or £30 in cash thus comes to do the work which £100 formerly did, and probably even more than that work, because paper circulates much more easily than gold or silver, and the same nominal amount in paper is consequently more serviceable in settling transactions than it is in gold.

In a great market, for instance, merchants and dealers can carry with them hundreds and thousands in paper, which, if they had to carry the same amount in metal, would require the services of a numerous staff with much increase of risk. Where a bank is the issuer, the money economised is also lent, and prices and rates for loans are directly influenced in that way. The next advance in the complexity of the system, viz., the introduction of banks and banking deposits and the cheque system, still more economises cash and increases its subtle potency; no one now keeps spare cash at all, except what the banker keeps in case of accidents. At this stage also the economy of capital as well as of cash becomes important; by the agency of the banks mainly, capital is kept circulating—no one wanting to borrow, who has decent security to offer, whether property or credit, need go without. The amount of such circulating capital, represented by loans of banks and deposits with them, may vary from day to day; but the adjustment is instantaneous. The institution of organised markets, and especially of the markets for securities, increases the complexity. Transactions in the market are now cleared directly; classes of intermediary dealers or speculators are introduced; the facilities are now such that any one with fixed capital can command circulating capital at any moment—he can either borrow upon it from his bankers, or sell it on the Stock Exchange to a dealer who will borrow from a banker if there is no immediate purchaser. In turn, those who have circulating capital can either invest directly in fixed capital by purchasing on the Stock Exchange, or indirectly by depositing with a banker. Capital as well as cash is thus economised. The final result is that the strength and elasticity of the modern industrial system are such that the greatest changes may occur unperceived. Enormous

payments are made and enormous operations are carried out daily to which the available cash would be a mere bagatelle.

The net effect of the whole change may be conveniently stated in the language of figures. Paper and cheques passing instead of money, the result is that in a country like England the daily payments in settling balances of transactions which are themselves enormously greater, probably amount to a very large proportion of the cash actually in use. The clearings of the Bankers' Clearing House alone in England, which undoubtedly are only a part of the total payments throughout the country, exceed 6000 millions sterling per annum, or 20 millions per working day. Estimates which have been made of the total property of the country, at current market rates, place it at about 9000 millions sterling, and the cash, whether gold or silver, being certainly under 200 millions, its proportion to the total property comes out at about 2 per cent. The circulating capital is no doubt much less than the total property of the country ; but it must still be enormous as compared with the 200 millions of cash—probably not less than five or six times that amount. Clearly then in the complex industrial system cash ceases to have the direct effect on prices or on the loan market which it has in a simple system. It becomes an unimportant item of circulating capital. Changes of credit and other things obscure its action on prices. Hence it is, in fact, that in the complex system the distinction between cash and capital becomes so clear, and people can speak of the rate for money in the sense of "monied capital" or "circulating capital" as being in no way related to or dependent on the amount of money, that is of actual cash, itself. f

But cash is not really unimportant. In the complex system, when the facts are analysed, cash is found to affect

rates for loans and prices in two ways: (1.) A special and peculiar use for cash is found in the complex system in the shape of banking reserves.* The cash reserve of a banker is the condition of his solvency. Theoretically, banking is an impossibility. If all depositors and note-holders wanted their cash at once, they could not be paid. What a banker must do then in respect of cash is (a) to keep enough for current demands—till-money as it is called; and (b) in addition, a reserve for extraordinary demands, for emergencies. Otherwise he is not only in danger of bankruptcy, but unless his cash is sufficient, bankruptcy is a mathematical certainty. Nothing is so certain as the unforeseen. There must be extraordinary demands, and a banker must meet them. The result is that cash sets a limit to a banker's liabilities; in other words to his loans and investments, which are the condition of his ability to receive deposits. He must either keep these deposits in cash, or use a limited and defined part of them in investments and loans such as experience shows he may safely use. He cannot exceed the proportion.

The limitation has for effect, as regards the aggregate cash of the country, that the nominal capital circulated by banks cannot exceed a certain proportion to the aggregate cash reserve. As the business of a country requires, in the complex system, that a certain portion of its property should be "circulated" by banks—that is, should be represented by the bank's deposits on the one side, and its assets, whether of

* The substance of the next few pages, it will be observed, exhibits the view of the subject to be found in Mr. Bagehot's 'Lombard Street.' It is necessary, however, for the purpose of clearness to repeat the theory in however condensed a form. See also a subsequent Essay in the present series on "Bank Reserves," where the subject is discussed practically.

cash or securities, on the other, then the nominal value of that portion cannot exceed a certain proportion to the banking reserve. The amount of this last proportion may vary, and does vary, within very wide limits. The means of replenishing the reserve at will are in fact as important to a banker as the reserve itself; the potential as well as the actual reserve must be considered. But the limitation is always there. The cash held by the banks in reserve, making all allowance, of course, for the instruments at their command for replenishing it, fixes an absolute and impassable limit to expansion. And as nominal values must all be equalised, this means that the cash reserve really sets a limit to all values in a country.

In our English banking system there is an additional refinement, in consequence of the existence of a banking hierarchy which dominates not only the banks of the United Kingdom, but has many foreign connections. Provincial and some foreign banks bank with London agency banks—usually the leading Joint Stock and private banks; these in turn have deposits with the discount houses and bill-brokers, and with the Bank of England; and the discount houses and bill-brokers in turn also deposit with the Bank of England. One bank leans on another, and so it comes about that substantially the main banking reserve of the English banking system is kept by the Bank of England only. But refined and complicated as the system may be, there must be cash somewhere, which sets an impassable limit to the mass of transactions based upon it, and particularly to the amount of nominal capital that may be circulated by banks; and consequently, as we shall see, to the whole amount of nominal property in a community at a given time. Like a small weight on the long arm of a lever, the cash reserve of a banking system has enormous force.

(2.) In the complex system also the use of cash as small change becomes specially important, and the requirements of cash for that purpose are undoubtedly associated with the range of wages and prices, while they necessarily act constantly on the banker's reserve. A certain level for wages and prices implies the use by a community at a given time of a corresponding amount per head of notes and of cash of different kinds. If wages and prices rise from that level, more notes and cash, "other things being equal," are required. If wages and prices fall below that level, "other things being equal," the cash requirements are diminished. This fact may be asserted here as one of obvious necessity and of common knowledge. If a particular district becomes prosperous, cash is attracted to it for small change. At certain seasons of the year, particularly in the tourist season, and at harvest time, more cash is required for people's pockets than at other periods of the year, and more is wanted when trade is brisk, than when wages are good and prices rising, than when it is slack.

There is thus a constant play, even in the complex system, between the amount of cash on the one side, and values on the other. The cash reserve, by imposing a limit on bankers' liabilities, regulates all nominal values. Similarly prices and wages cause a demand for cash as small change, and are necessarily limited by the amount of cash available. According as they permit an addition to banking reserves or tend to cause a deduction from them, they must also be related to the expression of all nominal values.

The question remains as to the precise way actual cash is related to changes in prices and in the rate of discount in a country where the industrial system is complex. To take first the rate of discount. It is quite true of course that mainly and primarily that rate depends on the relation

between lenders and borrowers, on the amount of capital offering on the one side, and the amount in demand by effective borrowers on the other side. The complex system, by making it clear that cash is quite insignificant in amount compared with the whole capital of a country, is so small in fact, that it may be neglected altogether in such a question as far as any direct influence is concerned, also places it beyond doubt that it is not by there being an increase or a diminution of capital directly that changes in the amount of cash can affect the rate of discount. The reason why cash affects the rate of discount is through its force being applied to the long arm of the lever to which we have already referred. The banking reserve affects the rate of discount, and is in turn affected by it in various ways. In the long run, and on the average, matters are settled by the relation of the supply of capital and the demand; but minor fluctuations must be settled by the varying relations of the cash reserve to the liabilities of the banks, and through them to the nominal capital of the country. Transitions from one normal level to another may also be assisted or retarded by the relations of cash reserve to banking liabilities.

The two points to be borne in mind in this connection are (1) That the affairs of a complex industrial community are seldom in equilibrium, and that while adjustments within wide limits in prices and values can be made without disturbance, yet there is constant action and reaction; and (2) That the rate of discount in the short loan market of a banking centre like London is not to be identified with the rate for loans generally—it is only the rate for special loans between special classes of borrowers and lenders, affected, no doubt, by the general rates obtainable for loans and investments in the country, but nevertheless a

thing *sui generis*, and in which there may be great changes without corresponding changes in the general borrowing rates. The broad proposition is that in the constant shiftings and changes incidental to the complex industrial system, the short loan market is necessarily affected in a special way—is acted on by, and reacts on other changes.

To begin with matters far enough away at first sight from anything directly connected with the short loan market. It is quite plain of course that there may be changes in the proportions of "long" and "short" money at different times. Lenders may change their minds and desire to lend their money for long instead of short periods and *vice versâ*; while borrowers may change in like manner. The short loan market is a wonderful piece of mechanism; the steadiness of the proportion of short money to the demands for it, though lenders and borrowers are continually changing, is not far short of a marvel; but the steadiness is only comparative, and there are constant changes within limits. Probably each variation in the rate makes alterations in the proportions of long money and short. Equally there may be changes in the amount of capital for investment and for loan. So also there may be great changes arising from the destruction of capital on the one side or the other, or—what is equally important for the present purpose—from the diminution of nominal capital through such an influence as a fall in prices or from its increase through a rise in prices. There is at no time an equilibrium, and every change tells on the sensitive short loan market. A change in the state of credit, again, affecting either the eagerness of borrowers to borrow or of capitalists to lend, may disturb the equilibrium. This last change I desire specially to notice because of its indirect, as well as its direct, consequences. An increase of lending

from whatever cause, especially in the short loan market, tends to raise prices. Borrowers borrow in order to purchase or to avoid selling. Hence prices rise, and the rise of prices adds to the nominal capital, and particularly to the nominal capital represented by the loans and deposits of banks. Wages in turn rise, and with their rise, as we have seen, requirements for small change are increased, and the banking reserve trenched upon. A diminution of borrowing has precisely the opposite effect. Thus when there is borrowing, a bank's liabilities are increased at the very time that a cause is in operation tending to diminish the reserve; and when borrowing diminishes, banking liabilities also diminish and the reserve tends to increase. To go one step further. The one instrument a banker possesses to check borrowing when his liabilities increase and his reserve diminishes, so that there is or threatens to be a want of the requisite proportion between them, is to raise his rate of discount, that is, the rate in the short loan market. He might, of course, refuse to lend while not raising his rate, but while in this manner he could restore the equilibrium by the one process of diminishing or not increasing his liabilities, he would of course do nothing towards increasing his reserve, which he effects in part by himself becoming a borrower. Raising his own rate to borrowers, which of course means on his part a larger offer to depositors, is thus a banker's instrument for restoring equilibrium. Improved credit and borrowing necessarily implies a relatively diminishing reserve and increasing rates of discount, checking in turn the rise of prices which the borrowing has produced. In turn, as his loans are paid off and his liabilities diminish, a banker's reserve increases relatively, if not absolutely, while competition ensures that rates of discount fall. This last process on a great scale also implies falling prices and wages.

In all these various ways, therefore, the rate of discount varies with the varying changes in capital and credit, which at least affect the amount and proportion of the banking reserve if they are not affected by it. But clearly, the changes in the bank reserve, arising from whatever cause, must be as material as those changes which are associated with changes of credit. If at a given moment the reserve of the Bank of England were to be suddenly reduced one half by an external cause—the whim of a great millionaire, or the mistaken policy of the ministers of any great country, any of whom would have power to lock up such an amount of cash,—every one would see that a condition of most unstable equilibrium would be produced. The banks would at once be compelled to raise their rates of discount, which would raise rates all round, although in the English system the reserve bank itself does not usually take money on deposit at interest. Equilibrium would have to be restored by the whole banks of the country reducing their liabilities on one side and increasing their cash on the other. Similarly an influx of cash into the banks would compel a lowering of rates until borrowing began again, and prices and wages rose. The reserve, in fact, may be considered to be specially effective in causing changes in the short loan market. The very fact of the usual completeness of the adjustment between borrowing and lending, and between the different kinds of borrowing and lending, makes the existence of a small surplus in the banking reserve above the usual amount excessively potent. If £20,000,000 of “normal” reserve supports a circulation of capital in the short loan market of perhaps £1,000,000,000, then an addition of £10,000,000 would require for the complete re-establishment of the former equilibrium between reserve and deposits an addition of £500,000,000 to the circulating capital—to the banking deposits on the one side and the securities on the

other ; while the rise in wages and prices involved in such a change would necessitate in turn an addition of a large amount to the cash in circulation as small change. What appears to happen is that when cash is added to the banking reserve it acts at first on the rate of discount, and tends to produce the addition required to the circulating capital of the country ; but the supply of cash for small change being only obtainable from the banking reserve, the reserve in turn is trenched upon, and the addition to the bank's liabilities is checked. In the English system of banking the effect of any extra supply of cash in the short loan market is usually very quick. The pressure to find borrowers develops every sort of operation by which nominal capital is increased, and prices and wages rise. At times when there is unusual discredit the operation is slower, but it is surprising with what rapidity the surplus ordinarily acts.

The addition of this surplus, it should be understood, has an effect which no addition of any other species of circulating capital to the resources of the money market can have. The latter can only act, in fact, in proportion to its relation to the whole circulating capital of a country. The cash, as we have seen, acts in quite a special way through the banking reserve. It is sometimes argued indeed that any kind of circulating capital brought into the country adds to the resources of the money market just as gold does. A merchant, it is said, brings home a cargo of wheat, sells it, and obtains a credit with his bankers for the amount realised. A merchant importing bullion does no more ; he gets a credit with his banker for the amount. But the essential difference is that the seller of the wheat only deposits with the banker what the banker has already had : the banker owes the amount to A. instead of to B. ; if there is any addition to the banker's liabilities through the operation, it is because he or

some other banker has previously lent to B., and in any case there is no addition to the general banking assets—to the reserve. A succession of such operations would inevitably alter the relation of the banker's liabilities to his cash, so as to compel him to raise his rate of discount. The importer of the bullion, however, deposits with the banker something which he did not have before—a surplus which may be the support of a new series of advances and deposits, until the reserve, as increased, bears the same proportion to the liabilities which was borne by it before the increase.

It does not follow, of course, from what has been said that the rate of discount in the short loan market is regarded as exclusively dependent on the amount of the reserve and its proportion to the liabilities. Of course there are many other circumstances to be considered by lenders and borrowers. The state of credit and what it is likely to be, estimates of the probable movements in the reserve itself, changes in the monetary systems of connected countries, and the thousand and one accidents to which business is liable, will induce the banker to keep or seek to keep a different reserve at one time than he would at another, and to vary his rates of discount accordingly. Those who observe the money market most carefully will be the first to recognise that sudden and sharp changes in rates are often quite as much due to sudden changes of the speculative opinions of bankers as to whether it is "safe" for them to lend or not, as to any other cause. One day there is a surplus to lend and next day there is not, just because somebody has changed his opinion. Thus there may be all sorts of rates of discount with all sorts of amounts of reserve and liabilities. But the reserve and the changes in it are none the less material factors. They are not everything, but they are much.

It is easy to see, then, how material an annual supply of

gold from the mines may become in connection with the rate of discount. One year with another, other things being equal, the population of gold-using countries increases in numbers, and commodities are multiplied in even greater proportion. Given the same range of prices and the same rates of wages and money incomes as before, and a continuance of the same general conditions of business, this means that one year with another a banker's deposits and liabilities will increase, or rather the aggregate deposits and liabilities of a given banking system will increase, and consequently a larger and larger reserve will be required. If no such reserve is forthcoming, then equilibrium can only be restored by a decline in nominal values, which must be brought about, if necessary, by a raising of the rates of discount. For similar reasons a steady increase in numbers and wealth, other things being equal, implies a larger and larger requirement for cash as small change. If no such cash is forthcoming, then it is quite impossible for the increased and richer population to effect their transactions. To effect them they must trench on the bank reserves, necessitating the same rise of discount rates and fall of nominal values which would in any case become inevitable from the decline in the proportion of the banking reserve to liabilities. The two effects are produced *pari passu*, and they contribute in turn to the same result. To maintain equilibrium in the complex system, therefore, a steady addition to the stock of cash is required. There is nothing that is more essential. Equally of course equilibrium is disturbed if more is added at any time than is required.

It follows even more clearly from what has been said that any sudden extraordinary demand for cash must have a marked effect on discount rates, and through them on prices in the way already described, until equilibrium is restored. The connection here is only too obvious. Such extraordinary

demands make a heavy inroad on banking reserves; rates of discount are raised and heavily raised; sales are precipitated; equilibrium is restored by a somewhat violent process. What will not be so readily admitted is that similar effects must follow a contraction of the gold supply of a less marked kind, though they may be more difficult to trace. But like causes produce like effects, and it seems really unnecessary to argue the matters theoretically. It lies in the very nature of a banking reserve that any important change in it should produce certain effects on the rate of discount, and through it on prices and wages until equilibrium is restored.

To take next the question of prices. It is apparent from what has been said that prices are affected by changes in the supply of gold. That supply is affected by, and affects in turn, the rate of discount. An impression indeed prevails in the City that prices are affected in no other way by the gold supply. In our present complicated banking system, it is urged, there is no direct connection between gold coinage and commodities; it is only through the discount market that prices can be affected at all. But this opinion seems as unwarranted as the opinion already discussed—that the rate of discount itself is not in any way connected with the gold supply. Prices may be, and must be, affected directly, and the effect on prices of discount rates is itself restricted within certain limits.

The point to consider about prices is that every price represents two things—1. (what every one sees) the price of a particular commodity in gold, and (2) what is not so apparent, the relation of that other commodity to commodities and things in general. The producer looks to the gold price, but the value to him of the gold price is what that price will fetch. Hence there is an incessant adjustment going on between wages and incomes of every kind, and prices. A

producer, unless he obtains a certain money price on the average, will cease to produce; he will go into something else. Ultimately it comes to this, that, unless capitalists and wage earners engaged in a certain production obtain a sufficient money price to give them the command they desire and are able to insist upon, over other things, the production will cease or diminish. The effect of this cause on prices may only operate insensibly; all sorts of fluctuations in price due to other causes may have to be allowed for, the average being only arrived at when long periods are reckoned; but it is a cause which is always operating and which must affect average prices. The money price in this view is mainly a medium for adjusting real prices, and these real prices are susceptible of adjustment directly and need not be adjusted *exclusively* through the discount market. There is no reason to believe that an incessant adjustment is not always going on.

The fact of such an incessant adjustment also makes it possible that the abundance or scarcity of gold may be felt on prices in a large degree without the process being perceived in the discount market. Suppose a fall of prices, due to over-production, to take place in a large group of articles where in any case there is a scarcity of gold tending to affect the discount market. The fall *pro tanto* relieves the latter market from whatever cause it arises. It is equivalent to a diminution of nominal capital, and so tends for the moment to relieve the disproportion between borrowing operations and the cash available to move them. It is the same, of course, with a fall of prices due to greatly diminished cost of production. The fall eases the money market and prevents a rise in rates of discount, or produces a fall in them, such as would not otherwise have occurred. The same with a rise in the price of a group of articles occurring when gold is

becoming more abundant. The rise as it goes on, with the increase of wages attending it, absorbs more gold. More small change is wanted—and, as we have already seen, there must be a steady increase of banking reserves, if the conditions of business are not to be changed—if equilibrium is to continue. The process may be quite insensible, but it cannot but go on, and it conceals changes in the real prices of commodities and securities relatively to each other which are all the while in progress.

To put the matter quite shortly, wages and profits are directly related to the quantity of gold in use. On these wages and profits depend prices. Changes in wages and profits are also incessantly affecting prices, which are in truth in the long run only wages and profits in another form, and under cover of these changes differences of scarcity and abundance in gold may be adjusted without the changes in the short loan market coming directly into play.

The changes in prices effected by changes in the short loan market, as we have seen, are mainly of a different kind. They are changes in credit prices. A time of good credit causes high prices, as we have seen; a time of bad credit low prices. The change from the one to the other range is usually connected with changes in the rate of discount. But there are other changes of prices constantly going on, only discernible when long intervals are reckoned, and these are directly related to wages and profits which are directly dependent on scarcity and abundance of gold. The adjustment in the latter case may be assisted or prevented by what goes on in the discount market: the fall of prices in a period of discredit may be exaggerated by a scarcity of gold making itself felt; the rise of prices in a period of good credit checked by a similar cause. But the cause is only contributory. There is no reason why the adjustment should not be largely direct.

II.—STATISTICAL ILLUSTRATIONS.

SUCH is the general aspect of the double question put when the "mathematics" of it are carefully examined along with some knowledge of the actual practice of bankers and commercial men as regards borrowing and lending, and the keeping of cash reserves. It is possible, however, to go farther and point out that certain facts as to the money market, capable of statistical proof, or which are otherwise obvious, are those which might be expected if the theory were true. More particularly the relation between low reserves and a high rate of discount; between high rates of discount and falling prices, and between low rates of discount and rising prices; between an irritable sensitive money market, and sudden demands for gold, are all matters of observation as well as of theory. In order to examine the facts of the money market at a given time, statistical illustrations of the theory already set forth may be useful.

The first point I propose to notice is the connection between higher rates of discount at one period of the year than at another, with the amounts of the reserve at the corresponding periods. There are periodical fluctuations in the money market according to the season of the year; reserves on the average are lower at one period than another; and money is higher on the average when the reserves are low than when they are full. As to the reason of this periodicity in the money market, I need not go into details. It is fully described in various papers. I would refer especially to Mr. Jevons's "Investigations in Currency and Finance," where the point is fully discussed in two papers, one "On the Study of Periodic Commercial Fluctuations," and the other "On the frequent Autumnal Pressure in the Money Market, and the

action of the Bank of England." I would also refer specially to Mr. Palgrave's notes of the evidence before the Banking Committee of 1874, and his subsequent book, 'Bank Rate in England, France, and Germany, 1844-78.' There are also many discussions in the 'Economist' on the same theme, dating as far back as 1858 or 1859. These papers contain so full an exposition of the fact of periodicity, and the causes of it, that it would be superfluous for me to go into them. I am only concerned at present to note, as fully proved, that reserves are ordinarily lower at some periods of the year than at others, and chiefly in the autumn period; and that one of the main causes is believed to be a greater business in making payments at one period than another owing to the reaping of the harvest, and the like influences, which results in a drain upon the central banks for cash. The note circulation of such banks also increases, when the reserve diminishes, and for a similar reason. Assuming this central fact to be proved, what I propose now to prove is the simultaneousness of high rates of discount with the low reserves, and to suggest as beyond dispute to all reasonable minds, that this simultaneousness cannot be a mere coincidence, but that it is due to the connection between the reserve and the rate of discount, which has been previously set forth. The banking system being what it is, and everything turning on the reserve as regards a banker's solvency, rates must be raised when the reserve is low and *vice versâ*. Possibly bankers should allow more than they do for merely periodical fluctuations; but if in fact it is difficult for bankers to do so owing to the constitution of human nature, aggravated as I believe is the case by peculiarities of the English banking system, then a periodic fluctuation in rates of discount, corresponding to the fluctuations in the reserve, is inevitable.

To show the connection in the most compact form I can

think of, I have compiled the accompanying short Table from Mr. Palgrave's very elaborate and exhaustive Tables in the books above referred to. Mr. Palgrave in those Tables works out for a long series of years the average monthly and yearly rate of discount of the Bank of England, and the proportion of the monthly average to the average for the year; and he also works out the average monthly and yearly reserve of the Bank of England, and the proportion of the monthly to the yearly average, the yearly average in the proportion columns being taken as equal to 100. The accompanying Table compares the results so obtained, completing the figures also from 1878 to the present time :

STATEMENT showing the proportion of the Average Rate of Discount of the Bank of England in each month during the Years 1845-84 to the Average Yearly Rate; and the proportion of the Average Monthly Reserve to the Average Yearly Reserve: the Average for the Year = 100.

Month.	Rate of Discount.		Proportional reserve.	
	Above average.	Under average.	Above average.	Under average.
January . . .	106	..	..	97 $\frac{1}{4}$
February . . .	..	99	103 $\frac{1}{2}$	..
March . . . .	..	96 $\frac{1}{4}$	110	..
April . . . . .	..	93 $\frac{3}{4}$	..	94 $\frac{1}{2}$
May	100 $\frac{1}{4}$	..	..	94 $\frac{1}{2}$
June . . . . .	..	95 $\frac{3}{4}$	108 $\frac{1}{2}$	..
July . . . . .	..	92 $\frac{3}{4}$	100 $\frac{1}{4}$	..
August . . . . .	..	93 $\frac{1}{2}$	100	..
September . . .	..	91 $\frac{1}{2}$	105 $\frac{1}{2}$	..
October	105 $\frac{1}{2}$	..	..	88 $\frac{1}{2}$
November . . .	114 $\frac{1}{4}$	..	..	92 $\frac{1}{2}$
December . . .	110 $\frac{1}{4}$	..	104 $\frac{1}{2}$	..

The effect of this Table is (1) that in the thirty years dealt with the reserve is above the average of the year

and the rate of discount below the average in the following months:

February,	July,
March,	August,
June,	September;

(2) that in the same period the reserve is below the average of the year, and the rate of discount above the average in the following months:

January,	October,
May,	November;

and (3) that the remaining two months, viz., April, where a reserve below the yearly average coincides with a rate of discount also below the average, and December, where a reserve above the average coincides with a rate of discount also above the average, are obviously transitional months—the low average rate of discount in April being followed by a high average in May, during which the low reserves continues, and the high average rate of December, while the reserve is also high, being obviously the continuance of the high average rates of October and November. In any case, notwithstanding these two exceptions, the correspondence is close enough to establish the general proposition. It cannot be a mere coincidence that, as a rule, all through the summer from June to the end of September reserves should be high, and rates of discount low, and that immediately after, in October and November, the circumstances should be reversed, reserves being low and rates high.

It would have been desirable to include in this table the figures as to the note circulation of the different banking systems of the United Kingdom—the Bank of England, the English country banks, the Scotch banks, and the Irish banks. But there are slight variations in the dates of maximum circulation which make comparison difficult. The dates for all, however, are as a rule either in the autumn or

early winter. For the English country banks it is October, when the proportion to the yearly average in the thirty years 1845-74 was 105; * for the Scotch banks it is November and December, when the proportions in the same thirty years were 107 and 109; and for the Irish banks it is also November and December, when the proportions in the same thirty years were 109 and 107. The date for the expansion of the Bank of England note circulation is earlier, being from July to October. In each of these months the proportion of 103 to the average of the year is reached, although the proportion in August and September is somewhat lower. The combined result is, as regards the reserve, that October is the weakest month of the year, and that the weakness is continued in November and December, mainly owing to the peculiarities in the Scotch and Irish banking systems, the tendency in England alone being toward improvement after October. It is unnecessary here to go into all these minutiae. The broad and general effect on the reserve is clear enough, and the coincidence of that effect with high rates of discount in the autumn on the average of years is also clear.

It would appear, however, that although in the greater number of years the reserve is weaker in October than it is in almost every other month of the year, yet the rate of discount is not so often above the average in October. It is in years when the rate of discount is itself above the average of a long period, that the rate in October is found to be above the average of the year. The comparison is not without interest. To take first the facts as to the reserve, which will be found in the completest detail in Mr. Palgrave's Tables down to 1874. I have continued these Tables to the present time for my own use, but it is unnecessary to print the new figures here.

* See Mr. Palgrave's 'Notes of Evidence, &c.,' p. 382.

The facts are that in the ten years, 1845-54, the reserve in October is in every year below the yearly average, often considerably below. In the next ten there are only two years, 1858 and 1861, in which it is above the average, the first of these following a year of panic, which is always a disturbing element. In the next ten years there are three years only, 1866, 1867 and 1870, in which the reserve of October is above the yearly average. One of these years, 1866, was a year of panic, the panic being in the early summer; another year, 1867, followed the year of panic; and the third year, 1870, was a year of Stock Exchange panic, with a minor monetary disturbance in July in consequence of the outbreak of the Franco-German war. In the last ten years there are again only three years in which the reserve of October is above the yearly average, viz., 1876, 1879 and 1883. Here the explanation that the years are panic years or follow panic years, does not apply; but 1876 was the year following the foreign loans collapse, and 1879 succeeded the year of the City of Glasgow Bank failure, which were events attended by more or less disturbance in the money market similar to what occurs at a time of panic. Generally, therefore, we may say that the reserve in October is usually below the yearly average, and almost the only exceptions are either years, of panic when the panic has occurred at an earlier date in the year or years following the panics or corresponding events.

When we come, however, to the rates of discount, it is found that in the first ten years there are only six years out of the ten in which the rate is above the yearly average; in the next ten years four out of the ten; in the next ten years four out of the ten; and in the last ten years three out of the ten.

But the years in which October is above the yearly average are also years in which the yearly average is itself high, as the following Table shows:

STATEMENT as to the Years in which the October Average Rate of Discount is higher than the Yearly Average, showing the Average Rate of each Year and the Average for the Ten-years' Period in which it is comprised.

Years.	Proportion of October month- ly average to yearly average.	Average rate of years.	Average of ten years— 1845-54, 1855-64, 1865-74, 1875-84.
1845 . . .	104	£ s. d. 2 13 7	3 8 8
1847 . . .	126	5 3 4	
1849 . . .	102	2 18 10	
1850 . . .	100	2 10 3	
1851 . . .	100	3 0 0	
1853 . . .	136	3 13 9	4 14 8
1855 . . .	125	4 18 9	
1856 . . .	107	6 1 10	
1857 . . .	104	6 13 4	
1864 . . .	123	7 6 10	
1865 . . .	139	4 16 3	3 16 5
1871 . . .	188	2 18 0	
1872 . . .	140	4 1 11	
1873 . . .	126	4 16 5	
1877 . . .	158	2 18 2	
1878 . . .	148	3 16 4	3 3 8
1882 . . .	121	4 2 6	

Thus it is in dear years, as a rule,—in years, that is, when the average for the year is higher than the average for the ten years in which it is comprised or closely approaches that average,—that the effect of a low reserve, usual in October, is felt in making the rates for that month higher than the yearly average.

To some extent, however, it is to be observed that although the average reserve is somewhat higher in November than it is in October, yet it is also in November considerably below the average of the year, while the rates of discount

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are also the highest on the average. Here the number of years in which the monthly rate of discount is higher than the yearly average corresponds better than October with the general average result, as the following Table shows :

STATEMENT as to the Years in which the November Average Rate of Discount is higher than Yearly Average, showing the Average Rate of each Year, and the Average of the Ten-years' Period in which it is comprised.

Years.	Proportion of November month- ly average to yearly average.	Average rate of year.	Averages of ten years— 1845-54, 1855-64, 1865-74, 1875-84.
1845 . . .	125	£ s. d. 2 13 7	3 8 8
1847 . . .	147	5 3 4	
1850 . . .	100	2 10 3	
1851 . . .	100	3 0 0	
1853 . . .	136	3 13 9	
1855 . . .	142	4 18	4 14 8
1856 . . .	115	6 1 10	
1857 . . .	141	6 13 4	
1860 . . .	120	4 3 6	
1862 . . .	118	2 10 11	
1863 . . .	130	4 7 10	
1864 . . .	109	7 6 10	
1865 . . .	142	4 16 3	3 16 5
1868 . . .	103	2 1 11	
1871 . . .	154	2 18 0	
1872 . . .	158	4 1 11	
1873 . . .	168	4 16 5	
1874 . . .	119	3 14 1	
1875 . . .	110	3 4 7	3 3 8
1877 . . .	168	2 18 2	
1878 . . .	146	3 16 4	
1879 . . .	121	2 7 6	
1881 . . .	143	3 10 0	
1882 . . .	121	4 2 6	
1884 . . .	164	2 19 0	

Thus in November, if not in October, there is a coincidence between the low reserve of that month, and a high average rate of discount in each year, as well as on the average of long periods. The explanation would seem to be that while in October the combination of causes to produce a low reserve is most marked, the effect in raising the rate of discount is postponed a little, and November shows that effect more than October. The practice, in fact, appears to be that the rate of discount is raised after the reserve has become low and not before, and so a month like November which succeeds the month of the absolute minimum of reserve exhibits more frequently than that month a higher rate of discount than the yearly average. But whether we take October or November, the tendency of the reserve to be at its lowest about that time, and the tendency of the rate of discount to be about its highest, is obvious. There is an undeniable coincidence, as far as England is concerned, between low reserves and high rates of discount in the periodical movements of the year.

A similar coincidence can be traced between the periodic movements of reserve, circulation, and rates of discount in other countries; but it would encumber the present paper—which is not intended to be statistical—to enter into the details. It may be stated broadly, however, that in France, in Germany, and in the United States, to mention the leading countries only, there is absolutely no question as to the tendency of coin and bullion and notes to go out of the banks in the autumn, while these are the months also in which, as a rule, the rate of discount is raised. In Germany and the United States, the date of greatest weakness for the reserve appears to be the end of September and the beginning of October, while in France it is later; but there is an interval, of greater or less duration, of weakness, in which rates of

discount go up. As a rule, also, panics occur during this interval of weakness. This has been the well-known experience in England, but it is the rule abroad also. The great panic in the United States in 1873 was at the end of September. The last financial crisis in France, viz., in 1882, occurred early in the year; but still during the interval of weakness which begins there late in the year and continues into the following year. When there are panics at other dates than those of the autumn they are usually in April or May, which are also times of comparative weakness of reserve in most countries. The Vienna panic of 1873 and our own great panic in 1866 are illustrations. With one or two exceptions like these, great panics as a rule have occurred during the autumn weakness.

It may be argued, indeed, that the increase of borrowing, when rates of discount increase in one period of the year as compared with another, is the cause of the increase of rates. But this is hardly arguable. The increase or decrease of borrowing from season to season, as compared with the general liabilities of the money market, is obviously quite inconsiderable, and is in fact hardly traceable. An increase of borrowing on a much larger scale frequently takes place in the money market, in connection, for instance, with a great loan operation, with hardly any effect upon rates. The one potent influence upon rates, therefore, to which these periodic fluctuations must be ascribed, is the condition of the reserve.

It follows, consequently, that the special importance of cash in the modern industrial system, though it is not as in a simple system a large portion of the circulating capital of a country, is established. It is of immense regulating power. It is able to produce changes in the money market, and affect for a time, at least, the rate of discount in the short loan

market. If the rate of discount in turn cannot but affect operations of every sort on which prices and wages depend, then the influence of "cash" on transactions, even in the modern system, is placed beyond doubt. It is not apparent, however, that there is much periodic fluctuation in prices, varying with the season of the year. "Mr. Jevons suggests that such a connection can, in fact, be traced.*" But even if this could be proved, I could not hope to do so within the limits I have set myself at present, while it is obvious that frequently many prices change in opposite directions to changes in the rate of discount. To affect prices greatly and over long periods larger variations in rates of discount must take place. The periodical fluctuations between one period of the year and another, though there may be such, would not in the nature of the case be easily traceable, and would hardly count. What happens, I suppose, as regards the effect of these minor periodic fluctuations on prices is, that *pro tanto* they produce their effect; some operations are influenced; but the effect may easily be lost in a more general and wider movement. Prices may tend to fall or rise through a periodic change of a minor kind in the rate of discount; but "other things" may not be equal, and the rise or fall does not in fact take place, while opposite movements occur. A change of credit, of the disposition to buy or sell, may make all the difference.

The next proposition I have to lay down, however, is, that there are longer periods in the money market than those of a single year or its seasons; and that in these long periods a distinct connection can not only be traced between low reserves and high rates of discount, and between high reserves and low rates, but also between high and low rates and

* See 'Investigations in Currency,' above referred to, *passim*.

falling or *rising* prices. It is the movement only which is here in question. The exact range of prices does not seem to be determined by the rates of discount; there is constant action and reaction, and the rates of discount, it is arguable, may really be determined to some extent by the prices; but prices fall when rates of discount are continuously high or when they suddenly become high, and rise when rates of discount are low or have been continuously low for some time. The difficulty in such matters is to give full effect to the proviso "other things being equal," but on a broad review of the facts the result seems clear enough.

To take first the connection between the rate of discount and the reserve over long periods. Looking back for the last forty years, it is found that the rate of discount is invariably higher in years of low reserve, by comparison, succeeding years of larger reserve and lower rates. There is almost all through a steady tendency for the normal reserve to increase, which is what we should expect; but what we are dealing with now is a large periodical fluctuation which can be traced, notwithstanding the underlying tendency to increase. The facts are brought to a point in the following Table:

QUINQUENNIAL AVERAGE RESERVES AND RATES OF DISCOUNT.

Years.	Reserve.	Rate of Discount.
		£ s. d.
1845-49	8·5	3 11 4
1850-54	9·8	3 5 10
1855-59	8·5	4 14 3
1860-64	8·4	4 15 2
1865-69	9·6	3 18 3
1870-74	12·3	3 10 3
1875-79	13·8	2 19 7
1880-84	13·4	3 7 7

STATEMENT comparing the Average Yearly Reserve of the Bank of England, and the Average Yearly Rate of Discount in the under-mentioned Years.

Year.	Reserve.*		Rate of Discount.*	Year.	Reserve.		Rate of Discount.
	Above average.	Below average.			Above average.	Below average.	
1845	8.5	..	£ s. d. 2 13 8	1865	..	8.0	£ s. d. 4 15 4
1846	8.5	..	3 6 6	1866	..	6.7	6 19 0
1847	..	5.2	5 3 6	1867	12.9	..	2 10 9
1848	9.7	..	3 14 5	1868	11.9	..	2 1 11
1849	10.6	..	2 18 7	1869	10.3	..	3 4 2
1850	11.2	..	2 10 1	1870	12.4	..	3 2 0
1851	..	9.1	3 0 0	1871	14.1	..	2 17 8
1852	12.7	..	2 3 0	1872	..	12.1	4 2 0
1853	..	8.9	3 13 10	1873	..	12.0	4 15 10
1854	..	7.2	5 2 3	1874	..	11.0	3 14 1
1855	..	8.3	4 17 10	1875	..	11.5	3 4 8
1856	..	5.7	6 1 2	1876	15.9	..	2 12 1
1857	..	5.3	6 13 3	1877	..	12.4	2 18 0
1858	12.0	..	3 4 7	1878	..	10.8	3 15 8
1859	11.1	..	2 14 7	1879	18.4	..	2 7 6
1860	..	8.4	4 3 7	1880	16.0	..	2 15 0
1861	..	7.6	5 5 4	1881	13.7	..	3 10 0
1862	10.1	..	2 10 7	1882	..	11.8	4 2 6
1863	..	8.5	4 8 2	1883	..	12.4	3 11 3
1864	..	7.4	7 8 0	1884	..	13.3	2 19 0

Nothing can be more striking in this Table than the correspondence between the high rates of discount in 1864-66 (which continued down to June of 1866) and the low reserve of those years compared with the large reserve of 1858-9; and similarly the high rates of 1872-4 and the low reserve of these years, compared with the years just before. In 1882-3 there is again an advance of rates and a reduction of reserve, as compared with what it had been immediately before. The coincidence is not quite complete, but it is

* The reserves of each year are compared with the quinquennial averages. For these, see accompanying table, p. 68, which also shows quinquennial averages of rate of discount.

complete enough to indicate that there is a large periodical movement in the reserve and rate of discount, the latter rising as the former falls, compared with the average, and falling as the former rises, also on a comparison with the average. The absolute amount of the reserve of the Bank of England has increased in the whole period in question; but this does not affect the present conclusion. The normal reserve ought to be larger in a progressive country from period to period. But whatever that normal reserve may be, there are years in which the average is lower, and in these years as a rule the rates of discount are higher than the average.

The years of *falling* prices and *rising* prices also correspond as a rule with those years in which high rates and low reserves and low rates and high reserves are combined. It would be difficult to show this within the limits of such an essay as the present, owing to the multiplicity of prices which makes averages difficult; but the coincidence between the more prominent of the above figures and the high and low index numbers * is not difficult to point out (see Table, p. 71).

Thus in years like 1865 and 1886 with which the Table begins, there is an obvious connection between the low reserve and high rates of discount of those years, and the high Index No., leading in the following years 1867-71 to a simultaneous fall in the Index No. and the rates of discount, and an increase, of the reserve. In 1872 the Index No. again increases, and simultaneously there is an increase in the rates of discount and a low reserve. In the following years, 1875-9, there is again a fall in the Index No. and in the rates of discount, but there is no such marked improvement in the reserve as in 1867-71. In 1880 the Index No. again rises, and rates of discount rise, but it is

* For these index numbers see previous Essay, p. 19.

not till 1882 that there is a combination of low reserve and a comparatively high rate of discount. Since 1882 the Index No. and rates of discount have declined together, but the combination of a high average reserve with the latter had

TABLE SHOWING YEARS IN WHICH THE INDEX NUMBER SHOWS AN INCREASE OR DECREASE AS COMPARED WITH PREVIOUS YEARS.

Year.	Index No. where increase or decrease on previous years.*		Years of high reserve and low rates.	Years of low reserve and high rates
	Increase.	Decrease.	Rates.	Rates.
			£ s. d.	£ s. d.
1865 . . .	3,575	..	..	4 15 4
1866 . . .	3,564	..	..	6 19 0
1867 . . .	..	3,024	2 10 9	
1868 . . .	..	2,682	2 1 11	
1869 . . .	..	2,666	3 4 2	
1870 . . .	..	2,689	3 2 0	
1871 . . .	..	2,590	2 17 8	
1872 . . .	2,835	..	..	4 2 0
1873 . . .	2,947	..	..	4 15 10
1874 . . .	2,891	..	..	3 14 1
1875 . . .	..	2,778	..	3 4 8
1876 . . .	..	2,711	2 12 1	
1877 . . .	..	2,715	..	2 18 0
1878 . . .	..	2,554	..	3 15 8
1879 . . .	..	2,202	2 7 6	
1880 . . .	2,538	..	2 15 0	
1881 . . .	2,376	..	3 10 0	
1882 . . .	2,435	..	..	4 2 6
1883 . . .	..	2,342	..	3 11 3
1884 . . .	..	2,221	..	2 19 0

not occurred up to the end of 1884. An absolutely close correspondence of all the movements in the three factors—the index numbers, the reserves, and the rate of discount—is of course hardly to be expected.† The general

* The figures of the Index No. are grouped in series—there being several years in which the figures are high compared with previous years just before, or as the case may be low. Minor fluctuations in single years are disregarded in this arrangement.

† The apparent discrepancies are to be explained, I think, by a permanent tendency of the normal reserve to fall in recent years.

tendency of prices to run in cycles along with corresponding cycles in the proportion of the average yearly reserve to the quinquennial average, and with corresponding cycles in the rate of discount appears, however, to be clearly enough brought out.

A main point to be studied here is that the low prices rather succeed the high discount rates, than exactly correspond, which is what we should expect. The high rates cause sales by borrowers, discredit is apt to attend them, and so there is a fall. Similarly it is rather at the end of a period of low rates of discount that prices rise than at the beginning.*

The connection between low reserves and high rates of discount has thus been made manifest statistically, first of all on a comparison of one period of the year with another, and then on a comparison of one group of years with another. It has also been shown that on a survey of longer periods the years of high rates and low reserves end in falling prices, and the years of low rates and high reserves in rising prices. Statistical proof was perhaps hardly required, but it may be useful nevertheless to have produced it. It seems unnecessary to go farther in this direction and to prove the various points in the theory which have been set out from a general examination of the facts of the money market. As regards prices in particular, the fact of great changes occurring without previous changes in the money market is so obvious as to need no proof, and is in truth one of the facts to be explained.

* It would be found, if the matter were investigated, that there is one set of prices which is more immediately affected by discount rates, viz., the prices of Stock Exchange securities. High rates of discount tend to lower Stock Exchange prices, and low rates to raise them. But to some extent the price of a security is the converse of a rate for a loan. A high price is a low rate for capital; a low price a high rate. The change in this case is consequently for the most part direct, and merely implies that the rate for capital of one kind affects by competition the rate for every other description. The subject hardly comes within the range of the present discussion.

It is not true that all changes in prices occur irrespective of changes in the money market, but *some* occur in that way, and the recognition of that fact is enough for the present purpose. On the other hand, while a general connection between high rates of discount and falling prices and conversely between low rates of discount and rising prices has been established, and by means of this the connection between high and low reserves and prices, it would be impossible to illustrate in detail how the effect is produced. Each particular price and group of prices must be affected, as already explained, by causes special to itself as well as by rates of discount; changes may also occur in prices, as above explained, which anticipate changes that are going on in the amount of cash required for the business of the country, and but for which anticipation the amount of cash would have made itself felt directly by a rise or fall in discount rates. That a change of any kind is perceptible, which can be connected with changes in the banking reserves and in the rate of discount, is enough for the present discussion.

III.—THE RECENT GOLD CONTRACTION.

THE history of the money market and prices in recent years corresponds with what theory would lead us to expect. As explained in the preceding essay, there has been a contraction of the gold supply for the former current purposes (*a*) by extraordinary demands for gold for Germany, the United States, Italy and other countries, and (*b*) by a falling off of the production. And there has in fact been a change in money values and prices as compared with previous periods to correspond, while there is no other cause to account for the changes.

There is no doubt, first of all, as to the change of money values which has taken place. The subject is fully discussed in the previous essay in this volume. I only note here *pour mémoire* as undoubted, that maximum and minimum prices have *both* fallen. Take any year of the last ten. Prices, it will be found, have fallen as compared with the corresponding year of the previous period. In the following Table the index numbers already quoted are so arranged that each year of the last ten is compared with the corresponding year of the previous decade, and it appears that in each year there is a decided fall:

Year.	Index No.	Year.	Index No.	Fall in 1875-84.
1865	3,575	1875	2,778	797
1866	3,564	1876	2,711	853
1867	3,024	1877	2,715	309
1868	2,682	1878	2,554	128
1869	2,666	1879	2,202	464
1870	2,689	1880	2,538	151
1871	2,590	1881	2,376	214
1872	2,835	1882	2,435	400
1873	2,947	1883	2,342	605
1874	2,891	1884	2,221	670

The change that has taken place is therefore a chronic one. It is not the result of accidental circumstances occurring in particular years.

It is in correspondence with this fact of a general decline of nominal values, that the income tax has progressed at a less rate in the last ten years than in the previous ten. The comparison is thrown out a little by the increase of "exemptions" in recent years, but there seems to be no doubt of the growth of the assessments lately at a lesser rate than was the case before 1875. In the ten years ending 1874 the assessments increased from 371 to 543

millions, or 45 per cent. In the following ten years the increase was from 543 to 629 millions only, or about 15 per cent. only. The exemptions would have to amount to about 160 millions if the rate of growth had really continued the same.

Workmen's wages have been affected in a similar manner, though it is impossible to give an aggregate figure. In many directions there has been a decrease, and it is doubtful whether they have not been stationary per head on the average as income tax assessments have been.

Next I have to notice that the normal amount of the Bank of England reserve does not seem to have progressed of late years. The fluctuations of this item have been irregular, the extreme lowness of the reserve about 1864 being apparently due to very exceptional causes resulting in the panic of 1866; but one year with another the normal reserve would seem to have been lately no greater than it was ten years before, although there are one or two years, viz., 1876, 1879 and 1880 in which the average is abnormally high, whereas an increase of the nominal capital of the country, proportioned to the increase of commodities, would have caused a considerable increase, such as in fact occurred between 1860 and 1870. The annual averages of each of the last two periods of ten years have been :

RESERVE OF BANK OF ENGLAND, 1865-84.

First ten years 1865-74 :—	Second ten years 1875-84 :—
1865 . . . 8·0	1875 . . . 11·5
1866 . . . 6·7	1876 . . . 15·9
1867 . . . 12·9	1877 . . . 12·4
1868 . . . 11·9	1878 . . . 10·8
1869 . . . 10·3	1879 . . . 18·4
1870 . . . 12·4	1880 . . . 16·0
1871 . . . 14·1	1881 . . . 13·7
1872 . . . 12·1	1882 . . . 11·8
1873 . . . 12·0	1883 . . . 12·4
1874 . . . 11·0	1884 . . . 13·3
Average . 11·1	Average . 13·6

There has been no such increase of the reserve, therefore, as a steady increase of the population in numbers and wealth must have produced, other things being equal. The explanation must be that everything has increased but nominal values, and as the function of the reserve is related to nominal values, the reserve has not increased. It is no doubt quite true that if we go back for a long period we shall find that for many years after the Australian and Californian discoveries, there was no such increase of the normal reserve as might perhaps have been expected. The figures for the whole period are :

AVERAGE ANNUAL AMOUNT OF THE RESERVE OF THE BANK OF ENGLAND IN FOLLOWING PERIODS :—

1845-9	.	.	.	.	.	8·5
1850-4	.	.	.	.	.	9·8
1855-9	.	.	.	.	.	8·5
1860-4	.	.	.	.	.	8·4
1865-9	.	.	.	.	.	9·6
1870-4	.	.	.	.	.	12·3
1875-9	.	.	.	.	.	13·8
1880-4	.	.	.	.	.	13·4

The reserve accordingly did not begin to increase till after 1864. The rise of prices and nominal values which followed the above discoveries would seem, however, to have been delayed till about 1860, while it has to be considered that from that date down to 1866 the money market was straitened by the demand for gold, which was created in part by the high range of prices and wages which had come to prevail. Now the normal reserve shows hardly any increase as compared with ten years ago, although the rate of discount has been low. The low prices and values have made a low normal reserve possible.

The demand for money in business has also corresponded to a slower increase of nominal values. It is unfortunately impossible to go farther back with the Clearing House Returns than 1869. But comparing each year since 1869

with a period ten years later, as far as that is possible, we get the following comparison :

RETURNS OF THE BANKERS' CLEARING HOUSE IN THE UNDER-MENTIONED YEARS COMPARED (in millions).

Year.	Amount.	Year.	Amount.	Increase in 1879-84.	
				Amount.	Per cent.
	£		£	£	
1869	3,626	1879	4,886	1,260	35
1870	3,914	1880	5,794	1,880	48
1871	4,826	1881	6,357	1,531	32
1872	5,916	1882	6,221	305	5
1873	6,071	1883	5,929	(-) 142*	(-) 2½
1874	5,937	1884	5,799	(-) 138*	(-) 2½

The conspicuous fact here is that while there is an increase in 1879-81 over the corresponding period ten years before, there is no such increase when we now compare the present time with years like 1872-4. From the latter date nominal values have declined.

The facts as to the bank-note circulation are of a similar character, though they require a little explanation. The annual averages for the United Kingdom of the quinquennial periods 1865-9, 1870-4, 1875-9, and 1880-4, have been 39·3, 42·6, 45·3 and 41·7 millions, the increase in the last quinquennial period compared with the first being thus about 6 per cent. only, while there is actually a decrease in the last quinquennial period on a comparison with the two periods immediately preceding. The decrease as compared with 1875-9 may be due to the fact that in that period the circulation increased specially owing to discredit, but this explanation obviously does not apply to the comparison between 1870-4 and 1880-4. Neither in the one period nor in the other was there any special discredit. There is a decline,

* Decrease.

however, in the note circulation of the United Kingdom, amounting to about $2\frac{1}{2}$ per cent.*

The facts as to gold going into circulation are even more instructive. Writing in 1872,† I calculated that the annual sum of gold received by the United Kingdom for all purposes, and required to maintain the equilibrium then existing—an equilibrium, that is, in which nominal values increased faster than population, corresponding in some measure with the increase of production and consumption—was about £5,000,000. This was based upon actual figures from 1858 to 1872. If this excess of imports had continued, the United Kingdom would have received in the last fifteen years £75,000,000 of gold, and in the last ten, £50,000,000. Actually the receipts in quinquennial periods have been:‡

Year.	Average annual imports.	Average annual exports	Average annual excess of imports or exports.	
			Imports.	Exports.
	mlns. £	mlns. £	mlns. £.	mlns. £.
1870-4	19·5	16·0	3·5	..
1875-9	19·3	17·6	1·7	..
1880-4	10·4	11·7	..	1·3

Thus the amount received in the last fifteen years has been in fact rather less than £20,000,000; in the last ten it has been about £2,000,000 only; and in the last five we have been losing gold on balance at the rate of $1\frac{1}{4}$ millions per annum. Clearly gold has not been going into circulation in proportion to an increase of the population in numbers. Here the plea of "economising expedients" does not avail

* For the figures here given as to note circulation, see First Report of Royal Commission on Trade Depression, Appendix, p. 155.

† See 'Essays in Finance' (first series), p. 103.

‡ See Report of Royal Commission on Trade Depression, Appendix, p. 156.

because there has been neither an increase of reserve nor of transactions at the Bankers' Clearing House to support or indicate an increased resort to such expedients.

As regards silver, the facts are that while the addition to the silver circulation was £1,200,000 per annum, on the average, in the ten years ending 1874, having perhaps been rather more than usual on account of the demand for silver for export to India in the immediately previous years, 1860-64, yet the addition in 1875-9 had fallen to £700,000 per annum; and in the last five years there is a small annual excess of exports.*

In every direction, then, there are signs of a change of nominal values. Prices have fallen; the income tax assessments do not increase; the Bankers' Clearing House returns fall off; the Bank reserve is stationary; bank-note circulation falls off; we export gold instead of receiving it; the silver token currency does not increase. These are the phenomena we should expect from a contraction of gold through the decrease of production, or an increase of the extraordinary demands upon it, along with an increase of business itself, *i.e.*, in the things produced and consumed. If there is a contraction of gold, telling on bank reserves and telling on the stocks available for small change, the effects above described should be produced. It would be a miracle if they were not produced.†

Turning to the rate of discount, we find the facts once

* See Report of Royal Commission on Trade Depression, Appendix, p. 156.

† The decline in the value of silver might also be referred to as proving a relative contraction of gold. Gold and silver being both used as standard money, and gold having become more valuable than it was relatively to silver, there must either have been contraction in gold or expansion in silver. One or the other event must have happened. But there is no reason to believe in the expansion of silver in regard to prices, as silver prices, though higher relatively to gold prices, have not risen absolutely. This argument, however, would require a paper by itself.

more in correspondence. What we find first is a striking disturbance of the money market at the maximum period of high prices, 1871-73, when the contraction of gold begins. With lower average rates than there were in the period immediately preceding, indicating a greater abundance of capital, and with very low minimum rates, yet for five years the market was "disturbed," and for ten years, from 1870 inclusive, there was at least one month in every year in which the average rate amounted to or exceeded $4\frac{1}{2}$ to 5 per cent. Excluding 1870, which perhaps hardly ought to count, as it was a year of money panic owing to the Franco-German war, while the extraordinary requirements for the German coinage could not of course yet be felt, we find that the maximum monthly average of 1871 was $4\frac{1}{2}$; of 1872, $6\frac{5}{8}$; of 1873, $8\frac{1}{8}$ and of 1874, 6 per cent., the highest minimum in the whole period being $3\frac{1}{4}$ per cent. only. There could be no better indications of an abnormal money-market. Actually in 1873 the rate was changed no fewer than twenty-four times. Of course in such a market there was a constant influence at work to produce a fall of prices. The following five years were even more remarkable. With a minimum average monthly rate of 2 per cent. in each year, the following maximum monthly rates were nevertheless touched, viz.:

1875 .	.	.	.	$4\frac{1}{2}$
1876 .	.	.	.	$4\frac{5}{8}$
1877 .	.	.	.	$4\frac{7}{8}$
1878 .	.	.	.	$5\frac{5}{8}$
1879 .	.	.	.	$4\frac{1}{2}$

Such relations are almost without example. When 2 per cent. rates have prevailed hitherto, the maximum as a rule has been correspondingly low; if now there is a relatively high maximum, it is surely a sign of special circumstances affecting the money market which cause the reserve to be trenched upon when it would otherwise be continuously full.

In the last five years rates have on the average been higher than in the five years before, corresponding to the better times for trade; but the maximum has been no greater than in 1875-9, although there is only one year, 1884, in which the minimum of 1875-9 is touched. The inference would be that in the last five years the money market has been less disturbed, though it has not been free from disturbance; but the cause of the cheapness is the abundance of capital, which in turn is due to the inability of the money market to rally, a big reserve being never allowed to accumulate, but being dispersed in all directions by the greatly increased current demands, resulting in a temporary rise of discount rates, renewed discredit, want of confidence, and a still keener competition and lower prices. In the present year (1885), when with dull trade and low prices the reserve should be full and discount rates low, we find that with a minimum of 2 per cent. there is again to be a comparatively high maximum (4 per cent.) within the year.

To sum up—what I have to say of the recent discount rates is that while there has been an undoubted fall in recent years, corresponding to the abundance of capital, yet the market has been fevered by the demands on the reserve, although that reserve itself has remained in a kind of equilibrium with the demands upon it, in consequence of the adjustment of nominal values which has been going on, at times, through the operation of temporary advances in the rate of discount, and incessantly through the direct action of competition and production—it is not necessary to assume overproduction. If capital had been scarce, there would have been high rates continuously, as in 1864-65, followed by a great fall of prices, accompanied or not accompanied, as accident might determine, by a panic; but capital has not been scarce. Consequently, though the money market has

been feverish, and there have been many spasms of dearness, rates on the average have been low. But prices do not recover as they did after 1866, and they cannot recover. There is no potential reserve, and no potential stock of gold available for the demands of small change which would inevitably spring up along with a rise of prices, profits, and wages.

The monetary history of recent years has accordingly been very like what was to be expected on the theory above set forth, assuming a contraction of gold to have occurred. All nominal values have diminished, or failed to increase as they ought to have increased, other things being equal, along with an increase in population and wealth; bank reserves, note circulation, small change, Bankers' Clearing-House returns and the like figures, have all moved in correspondence; finally the money market has been irritable and feverish in a remarkable manner during the period of contraction. On any other theory the monetary history of the last few years would be unintelligible.

IV.—SUMMARY AND CONCLUSIONS.

It will now be convenient to state briefly the main propositions of this essay, and the evidence on which they rest.

1. In a simple industrial system prices are directly affected by a contraction or increase of the supply of money. The rate for loans is also directly affected, cash being relatively a very important item of circulating capital.

2. In a complex industrial system in which bills of exchange, bank note issues, banking deposits and accounts, cheques, clearing houses, and other agencies are made use of, along with an extensive organisation of credit, to economise both cash and capital, prices are no longer directly affected by the cash. Immense and almost indefinite changes of prices may take place on the same apparent basis of cash.

As regards loans, also, cash ceases to be, in such a system, a considerable item of the total capital of a country, whether circulating or fixed. Its amount would seem to have no direct relation to the rate for loans.

3. Cash is, nevertheless, of special importance in a complex industrial system, and is intimately related both to the rate of discount in the short loan market and to prices. This special importance is due to two things. (*a.*) Cash is wanted in the complex system as a banker's reserve, and the amount of that reserve depends on the banker's liabilities, which in turn are regulated, other things being equal, by the amount of the nominal values of capital. If the nominal values are large, more reserve is required than if they are small. Hence there is incessant action and reaction between the reserve and nominal values. (*b.*) Cash is wanted in the complex system as small change, the amount of the small change required depending in turn on the rate of wages and profits, *i.e.*, on nominal values. A high range of wages and profits demands more cash than a low range. The requirements of cash on the latter account appear to be larger than those in connection with the reserve; but the two are interconnected, a reserve being more efficient if there are large amounts of coin circulating to be drawn upon, and *vice versâ*.

4. The effect is that although the rate for loans is undoubtedly dependent, as regards its normal condition and the more permanent changes, on the scarcity or abundance of capital in relation to the demands upon it, and although prices change within very wide limits on the same basis of cash, yet in the complex, as in the simple system, the element of cash is important. As regards the rate for loans, it has much immediate effect on the short loan market, and through that market on general prices. A scarcity of cash, other things being equal, tends to lower prices—abundance of cash to raise them. High

prices again, by increasing the demand for small change, tend to make cash scarce and low prices to make it abundant; and these tendencies in turn react on the rate of discount.

5. Changes of prices may, and in fact do, occur from other causes than changes in discount rates, and may anticipate such changes, so that the market may adjust itself to a new state of things as regards prices, without those changes in the rate of discount which would otherwise occur, and which would bring about the adjustment. Slight changes in discount rates may accordingly co-operate in bringing about great adjustments which it would seem to be beyond their power to effect.

6. It follows that in a complex, as in a simple system, the supply of new gold from the mines is important. Other things being equal, a constant new supply is necessary for reserve and small change, so as to keep affairs in the money market in equilibrium. Population and production are constantly being increased, and the gold used for reserves and small change must be increased in proportion. Otherwise the effect of contraction is necessarily produced.

7. In actual fact the importance of cash in the money market is proved by experience. In one period of the year reserves as a rule are lower and rates of discount higher than at other periods. In one group of years reserves are also lower and rates higher than in others. When there is much strain on the reserve from any cause, rates are high and the money market disturbed.

8. Recent experience has also shown that the effects which might have been expected from a serious contraction of gold, owing to diminished production and the heavy demands which have fallen on bank reserves and the cash used for small change, have in fact been produced. Prices have fallen; nominal values have not increased in proportion to the increase of production; bank reserves, Bankers' Clearing-House

returns, bank-note circulation, cash used for small change—have all been stationary or declining; the money market has been disturbed in the way in which a contraction of the gold supply might have been expected to disturb it.

9. As the result, the importance of a new supply of gold from the mines is fully proved. Other things being equal, increase of population and wealth means an addition to the stock of gold in use, and if there can be no such increase owing to diminished production or extraordinary demands, the market can only get adjusted to the contraction by a fall of prices and nominal values such as have taken place in the last few years. The general fall of prices need not take place exclusively through a rise in discount rates, though it may be assisted by such a rise; but when it takes place it may obviate a rise which would otherwise have occurred. The adjustment must somehow be made.

10. The question, "other things being equal," is of course specially important. It has often been suggested that economising expedients may be relied upon to counteract a contraction of gold. But in countries which are fully "banked" and "papered," there appears to be a limit to new economies of that description. A country long used to bank-note issues and the cheque system can hardly have any extension of economising expedients, except in a very gradual way.

Such being the conclusions on the question discussed, we may consider for a moment what is the prospect in the immediate future as regards the money market and prices. How far does the probable gold supply correspond with the probable increase of population and wealth among gold-using countries? How far will any scarcity be mitigated or abundance increased by economising expedients?

This is a statistical question which need only be answered very briefly—to show what are the possibilities of the future.

The supply of gold, to begin with, may be put roughly at

£20,000,000 annually. Mr. Soetbeer's latest estimate is rather less, but in a calculation like the present a million or two is not very material.

The next question is of the demands. There is first the demand for gold for use in the arts, which is put by Mr. Soetbeer at nearly £10,000,000; but which is not half that amount, as far as I can judge, if we exclude what is taken for the arts out of the coinages of different countries, and which will be counted among the coinage requirements. Let the estimate for this purpose be £5,000,000.

The next demand is for the gold reserve and coinage of different countries. The principal reserves and stocks of that kind are the following—

		mlns. £
Bank of England	average	25
„ France	„	45
„ Germany	„	20
United States Government, including } gold certificates of Banks. . . }	„	40
Bank of Russia	„	25
Other banks	say ?	25
Total		180

This is not a large amount; but, as we have seen in the course of this inquiry, the requirements of gold for small change are more important in some respects than for the reserve. The total may be very much larger. M. Ottomar Haupt, an excellent authority, estimates that in all the stock of gold in existence generally in the different countries of the world, silver-using and double standard as well as gold-using countries, exceeds £700,000,000.* Using this figure as the basis, I have to submit the following calculation:

The annual requirements for gold reserve and coinage on

* Währungs Politik und Münz Statistik, Berlin, 1884. Verlag von Walther und Apotant. [There appears to be some doubt, however, both as to the stock of the precious metals in any country not held by the banks in reserve, and as to how much really "circulates." I only use the figure here quoted for discussion.]

the basis of an increase of population at the rate of rather more than 1 per cent. in ten years would be 15 per cent. in ten years; and if we allow 10 per cent. additional for increase of wealth, we get an increase of 25 per cent. in ten years, or, say roughly, 2 per cent. per annum. This would mean at present a demand of £14,000,000 per annum to keep up a stock of £700,000,000, and the proportion would year by year become less and less sufficient.

The two sums together, £5,000,000 for the arts and £14,000,000 for reserves and coinage, would just about absorb the present supply. There is no margin for any extraordinary demand, however slight.

The conclusion accordingly is, that apart from economising expedients there is no rise in nominal values probable, one year with another. If there is abnormal depression at the present moment it will be recovered from, but the average level of prices and nominal values in the next ten years will, if anything, be rather less than in the last ten. If a new extraordinary demand of a large amount should arise, prices would probably fall in proportion to the amount extracted from existing coinages and reserves; and the money market would be feverish and disturbed.

The only question thus comes to be as to the extension of economising expedients. England, it seems obvious, could do something to mitigate the apparently impending contraction by resorting to one-pound notes. In France and other countries there is also to all appearance much room for the extension of the banking deposit and cheque system. But is it likely that much will in fact be done in any of these ways? Conservatism in money matters is very strong, and my own belief is that the introduction and extension of any such economising expedients will be so gradual that all the effects of contraction will in fact be felt. It should be considered

of special importance that the gold-using country which is now progressing most rapidly is the United States, which requires a very large amount of circulation per head, and which appears to be specially fettered in its bank note and paper circulation, so that the demand in the United States may be in even greater proportion than 2 per cent. per annum. It would thus appear inexpedient to place much reliance on the mitigating effect of economising expedients.

It remains to be added—what perhaps might go without saying—that any understatement in the above calculation of requirements implies that not only can there be no increase of prices and nominal values in the next ten years, but that there will probably be a fall. Even if economising expedients are introduced, their effect can only be temporary. The permanent set of the facts is the other way.

I do not propose to discuss at present the general effects of the economic conditions described. I did so some years ago on one or two points in a special essay reprinted in the present volume.* But I am quite certain I have not exhausted the subject, nor would it be easy to exhaust it. Many more things besides the betterness or worseness of trade are involved. The social effects of a fall in prices and wages, continued from generation to generation, are great and pervading, as we see in the present fall of rents, the inelasticity of the national revenue, and the increasing burden of all debts—the national debt and the debts of local authorities included. Nice problems seem also likely to be raised with regard to a revisal of railway rates and other fixed charges in the State concessions of monopolies. The problems are in truth endless, which at bottom are finally dependent on this question of the annual gold supply and the probable demands upon it.

* See next Essay.

III.

THE EFFECTS ON TRADE OF THE SUPPLY OF
COINAGE.

I.

THE question I propose to discuss is the comparative effect on the growth of the wealth of communities of an excessive or insufficient supply of the precious metals for their current wants. It is possible that the subject has been formerly discussed in some works on political economy, but I doubt if the discussion has anywhere been exhaustive, although the references have been frequent. To go very far back, indeed, I should judge from a reference to Xenophon, in the work of M. Lenormant on Ancient Money which has just been published, that Xenophon had assumed an indefinite addition to the silver coinage of Athens to be desirable as leading to an increase of wealth, so that as long ago as the time of Xenophon the subject must have attracted attention, and a decision in favour of an excessive supply of the precious metals had been pronounced. Xenophon's opinion, however, seems to have been based very much upon the special circumstances of the republic to which he belonged, which was a silver-producing country, and which no doubt gained indefinitely by being able to produce large quantities of an article in great demand elsewhere. Other references of a similar kind are to be found in more modern writers, while a

passage in Adam Smith points out that prices and affairs will be gradually adjusted to the diminished or increased supply of the precious metals without touching on the effects upon trade—adverse or otherwise—in the process of adjustment. An analogous subject has been discussed in the controversies upon inconvertible paper, for which there are advocates on the score of the assumed conduciveness to material prosperity of constant additions to the supply of money, and opponents on the ground, amongst others, that the prosperity so produced is unreal, and not lasting. But the analogy is obviously incomplete, as an inconvertible paper can only be added to artificially, while the metallic money is added to by natural processes. What has happened with inconvertible paper may be useful in illustration, but the essential difference between a sound metallic currency, forming the standard money of a country, and any form of inconvertible paper, we may here assume, I hope, must always be important. The most extended discussion of the point that I am aware of is in the continuation of Tooke's 'History of Prices,' where the great value to trade of a sufficient supply of new money is insisted upon; but the argument is mainly directed to show that very large supplies of new money would not in fact raise prices so much as those who were alarmed about the gold discoveries apprehended, and is thus to a great extent a negative argument to reconcile people to these gold discoveries, and not professedly a comparison of what happens in a *régime* of rising prices with what happens in a *régime* of falling prices.

In coming to the discussion, I should like to make one or two preliminary remarks, partly to explain how the subject now becomes important, and partly to narrow the question for inquiry and explain the assumptions implied in it. The importance of the subject is due entirely, I believe, to the

increasing complexity of modern business, and the diminishing quantity of money in proportion to transactions required in commercial affairs as now carried on. In early stages of society where credit is not developed, it is difficult to conceive of almost any change in the annual supply of the precious metals for repairing waste of coinage and the like having much effect on the productive energies of a people, except perhaps on a State like Athens, which was a producer of the precious metals. In such a community the quantity of money in proportion to the exchanges effected must be at a maximum; the growth of population is usually slow; the conditions are such that an excessive or deficient supply of the precious metals would only affect prices slowly. With a little pinching, existing money, if there was a deficient supply, would be made to fit actual transactions, while the additional influx, if there was an excessive supply, would not at first be felt. The habits of hoarding in such a community would also mitigate the effects of changes in the annual supply. There would consequently be no stimulus or check one way or the other to the productive energies of the community, such as I assume for the present great and sudden changes of prices are likely to produce. But the result of carrying on larger and larger transactions on a narrow basis of coin or bullion is to magnify the relative importance of changes in that article. It may still be true, and I believe is true, that the bullion in a country under a given set of conditions is the final measure of prices in that country; that an addition to the quantity or a deduction from it disturbs the equilibrium, and the balance is only set right again by an adjustment of prices. But the measurement is more difficult to perceive than where the daily transactions of life are daily settled by the passage of actual coin, and where both the habit of hoarding and the habit of using

the precious metals for ornament are probably very much developed. In highly advanced communities prices are adjusted by the complex machinery of the money market and the varying rates of discount, and through the agency of waves of credit and discredit, to which all commercial communities are subject, not by the direct processes of a barbarous or less advanced community. Hence the probability of prices in an advanced community only being adjusted to the supply of precious metals with great indirect effects on productive energies. Anything that affects the money market greatly, I need hardly say, and which sets in motion such powerful agencies as credit and discredit, must have a potent influence on the production of wealth in such communities. Almost without showing the *modus operandi*, we may assume that a country like England, with a bullion and coin stock of something like 150 millions, which is probably little more than between 1 and 2 per cent. of the country's wealth, is likely to be affected more seriously by slight changes in that stock than where the stock is a sensible part of the national fortune.

The subject also becomes important, perhaps, because of what I may call the statistical position of the question at the present time.* Not only is the relation of the annual supply of the precious metals to the stocks in use more important than ever it was, but we seem to be at the beginning of one of the many oscillations to which the value of the precious metals has in the course of history been subjected. Adam Smith believed that from the American discoveries in the sixteenth century till the time he wrote, the value of silver had been depreciating and prices rising, but he thought the tendency was changing; while there is equally little

* This was written and published anonymously in 1879.

doubt that from Adam Smith's time to the middle of the present century the value of the precious metals appreciated and prices were falling. In 1850 there was a sharp oscillation in the opposite direction, owing to the Russian, Californian, and Australian gold discoveries. Prices for about twenty years afterwards continued to rise, allowing for the usual cyclical changes in them. But now, along with a diminution in the supply from the mines, there is everywhere a vast increase in the population of civilised communities, and a more rapid multiplication of the objects of exchange, so that prices seem once more likely to fall. I should say also that, allowing for almost any progress in the modes of working the precious metals, and for farther discoveries like those of Australia and California, the probabilities now are that on the whole this insufficiency of the supply of the precious metals is likely to be permanent. The rapidity with which the Australian and Californian discoveries have been used up, as it were, is a novel phenomenon, resulting itself, I believe, from the more complex organisation of modern societies. Any farther discoveries of a startling kind will probably be used up with equal rapidity, and a *régime* of appreciating precious metals and falling prices again set in. It becomes an interesting inquiry, then, what the effect of such a condition on trade will be, as contrasted with the opposite state in which the supply from the mines is constantly in excess. This last condition, though there has not been much formal discussion of the subject in all its bearings, has usually been assumed—from the time of Xenophon downwards—to be more favourable to the growth of wealth than the opposite; but if the condition is to cease to exist, it may be as well to understand what the effect of its absence and of the presence of the opposite condition will be.

II.

So much for the present importance of the subject. With regard to the assumptions in the question, and the limitation of the inquiry, I have put it that an insufficient supply of the precious metals for current wants—that is, for wear and tear, increase of population and wealth, &c.—leads to a fall of prices, and an excessive supply to a rise of prices; and I desire this to be assumed. Of course, in real life, the effects of this one factor will be mitigated or aggravated by other causes. A farther economy in the use of the precious metals as money would compensate a failing supply. The growth of a new community, like the people of Russia, say, in wealth and civilisation, might, on the other hand, absorb a wholly new supply of great magnitude. A new invention like the steam-engine might have the effect of supplying communities with masses of wholly new articles as well as the old, which would in turn become the objects of exchange. To clear the ground, we assume that other things are equal, and that an excessive or insufficient supply of the precious metals, sufficient to alter prices, comes upon communities in equilibrium. We must exclude from our view any such indirect effect upon the prosperity of particular communities as that which results to a country producing precious metals from the prosperity or the reverse of a special industry. As far as money is concerned, the world is neither richer nor poorer by gold or silver mining being productive or the reverse. If gold could suddenly become one hundred times more valuable than it is, and prices in all gold-using countries could be adjusted with perfect equity to debtors and creditors, no one would be poorer if ninety-nine out of a hundred parts of gold were suddenly to be obliterated. The

question for us is whether, in societies like those of England at the present time, the process of adjustment will be such as to have an indirect effect on the productive energies of the country, and therefore on their growth in material prosperity.

The mere statement of the question helps, I think, to an answer. My first proposition would be that from all we know of modern societies, and the conditions of industrial production, a *large* and *sudden* increase or decrease of the money used in the daily transactions of the community, whether used as reserve in banks or in active circulation, would be disastrous in the extreme. Suppose the case of an increase: the result at first looked for from the Australian gold discoveries would happen immediately, and there would be almost a social revolution. Debtors would suddenly become rich, the creditors poor. People with annuities or such incomes would find them suddenly worth only half what they were before. An impetus would be given to illegitimate speculation, which writers like Ricardo and Huskisson have deplored as one of the consequences of the issue of inconvertible paper. The disturbance would certainly diminish production and accumulation for the time. On the other hand, a large and sudden abstraction from the money of a country, if that were conceivable, would be equally potent for mischief. The rich would become enormously richer, and the poor enormously poorer. Debtors would be ruined all round. Discredit would become such, that for a time the business of such a community would almost be entirely stopped. The paralysis of industrial energy which we now witness, and which is largely due to mere faint-heartedness, would be exhibited with distressing exaggeration.

But while the effects of sudden and great changes appear to be not doubtful, and to be so mischievous that it is not

worth considering whether a large and sudden increase or decrease is the most mischievous, it must be equally obvious that there will be a point where the excess or insufficiency of the new supply may be so small that the effects will be imperceptible. The present is not a matter where we may assume that evil effects will be produced *in proportion* to the excess or insufficiency. The effects are supposed to result from disturbance, but as minor excesses or insufficiencies produce no disturbance, it cannot be proved in this way that they produce ill effects at all. In any case, amidst the causes of great fluctuations in business, such as bad harvests, great failures, and the like, it would be impossible to trace the effects of so minor a cause as this, say an excess or insufficiency tending to raise or depress general prices in the course of a commercial cycle by 2 or 3 per cent. only. So difficult is the subject, that it would perhaps be impossible to prove with certainty any general change of prices to that limited extent.

There remains the case, however, of an excessive or insufficient infiltration of new money, which is neither so extreme as we have first supposed, such as a sudden duplication of existing money or a sudden reduction of it by one-half would be; nor yet so insignificant that the effects would be imperceptible. Say there is an excess or defect sufficient to raise prices or depress them in the course of a single industrial cycle by from 10 to 20 per cent. or upwards. Would such changes affect the productive power of the communities affected injuriously or otherwise? and would they be most powerful for good or evil, when prices rise or when they fall?

Taking up the question within these limits, I would answer that a gradual infiltration of new money above what is required for current wants—to take first the case of an

excess in the supply of money—would, on the whole, be injurious to the accumulation of wealth in a community. It does not follow of course that because an influx of new money, amounting perhaps to 100 per cent., causes an economic disturbance of a serious kind, therefore an influx of 10 per cent. only in a short period would produce 10 per cent. of the mischievous consequences of the addition of 100 per cent. The difference in a quantity, in the economic as well as the material world, may produce effects differing not in degree but in kind. But the gradual infiltration of new money, exceeding by even less than 10 per cent. of the existing stock what is required for current wants, with prices preserved at an equilibrium, would probably have mischievous effects, though it would not cause an economic disturbance. As modern industrial communities are now organised, especially a community like that of England, the whole addition to the new money would be placed exactly where it is most dangerous. Not being wanted anywhere, and the holders being anxious to do something with it, it would find its way, pending investment, into the central banks of the country, and immediately increase the surplus which these banks had to lend. Even the use of the money to buy some existing security would not alter matters much, for those who sold the security would in turn have the money to use. The surplus would thus remain in the market, tempting to speculation, raising wholesale prices in all directions, and raising or swelling one of those waves of undue credit which from time to time pass over the money market, and which are invariably unwholesome and malignant. The effect would be different at different times. The nature of the markets being such that at times, owing to discredit, unused gold tends to accumulate in the banks until a new stimulus to credit is found; the additional new

money then coming in would probably be unnoticed, but it must plainly swell the heap, while the addition annually coming forward will prolong the stimulus once given beyond the period when it would naturally be exhausted, *i.e.* beyond the period when exhaustion would ensue, if there were no new supply from the mines but what is necessary to keep prices in equilibrium. All this effect I must regard, along with those who have denounced the hollow prosperity due to a constant swelling of the volume of paper money as injurious. The natural disposition to undue speculation is strong enough and produces mischievous enough effects in promoting waste, misdirecting industry, and deteriorating the workman, without any special stimulus being given to it. In given cases in real life the stimulus may fail of its mischievous effect through the operation of other causes which nip the speculation in the bud, but its tendency seems clear enough.

The amounts, too, may be comparatively small which help to produce such mischievous effects. After considering the statistics very carefully, I doubt whether the annual addition to the stock of coin and bullion in England prior to 1870 had for many years exceeded five millions a year, although up to 1870 prices were believed to have been rising. Even an excess of five millions in any one year, therefore, would probably have a great effect on wholesale markets and speculation, and such an excess continued for several years could not but add fuel to the flames.

Probably the speculative excitement of 1872 and 1873 was fanned by the previous accumulation of the years 1866-70, which was enormous, and happened to be temporarily increased by the first effects of the Franco-German war. We know now what was the resulting mischief of this speculative excitement, although the worst consequences

were, perhaps, averted by the sudden demand for gold for Germany which precipitated the collapse of the speculation in 1873. In all countries with inconvertible paper the languor and reaction which succeed the happy days of expansion have become familiar, the condition of the United States in 1873 even before the panic being a good illustration.

To take next the case of a deficiency in the supply of new money to meet current wants, with prices at an equilibrium. I think we may say that this effect is also, in all probability, injurious, and even highly injurious. It may mitigate the speculative inflation of an excited period, by shortening the stimulus which would have been given by the ordinary upward oscillation of credit; but, on the other hand, it is a constant source of new discredit and of difficult adjustments, which will all tend to contract the volume of trade and paralyse productive energy. In the ordinary working of the money market, coin is constantly going out from and into the banks to meet wants based on the actual adjustment of wages and prices at the time. In a time of discredit these wants are momentarily less, and in a time of good credit they are momentarily more than the average, but one year with another an additional new supply is required on balance for wear and tear of coinage, growth of population, &c. Prices are in equilibrium if as a rule the general level in one period of good credit tends to be about the same as the last, and the intermediate oscillation downwards is also to about the same level as in the previous period. But when the new supply falls short, the tendency of the downward oscillation is exaggerated, just as in the case of an excess of new money the stimulus to inflation is prolonged. The renewed stimulus upwards must also be delayed. The result is a disagreeable, irritating contraction, producing a despondency which is

itself paralysing. People say there seems no limit to the fall in prices.

I think we may say, too, that a general fall of wholesale prices amounting to 10 or 15 per cent. in the course of an industrial cycle, in addition to the usual oscillations incidental to that cycle, would have a great effect in adding to the insolvencies of the depressed period. Could we suppose the fall taking place gradually, it is hardly possible that traders would be much affected. A difference in a year of 1 or $1\frac{1}{2}$ per cent. in the prices at which they buy and at which they sell, compared with what they would otherwise have been, can hardly be material to traders. Their expectations of profit are based on much wider differences than this, and though they might suffer a little from the gradual dwindling, no one is likely to be ruined who would not otherwise be ruined. Unfortunately, great changes of prices are apt to occur suddenly, and the additional fall due to contracted money coming suddenly to help the cyclical fall due to discredit, might, and probably would, have a great effect in extending the area of insolvency. People who would have struggled through are bowled over by the extra difference; their fall entails that of others; and so the area of depression is increased. The resulting additional stoppage of industrial production must be serious, though it would be impossible, of course, in real life to trace the exact effect of each stage in a fall of prices.*

* In point of fact the history since 1879 has been one of a brief inflation, checked, as I believe, by the scarcity of gold; but the subsequent fall of prices has not as yet been accompanied by unusual failures. Failures have rather diminished. The check to inflation would appear for the present to have prevented failures. But it remains of course a possibility that in somewhat different circumstances the aggravation of a cyclical fall of prices by a contraction of the gold supply may lead to more failures than what would otherwise occur.

III.

As compared, then, with a state of things in which there is just enough new money to keep prices at an equilibrium, that is, oscillating between the same extremes from cycle to cycle, we are led to conclude that an excess or insufficiency of current money for new wants, when that excess or insufficiency is at all considerable, although not of an extreme kind, must be injurious. It remains, however, to ask whether excess or insufficiency of that character is most injurious, and I am inclined to think, though it is difficult to measure the extent of the evils in either case, yet, from their nature, those arising from an insufficient supply of new money must be the worst. A speculative period, whatever may be its other defects, is favourable to production of some kind. Wrong things may often be produced, but the industrial machine is kept going, and amidst all the misdirection, right things in abundance must also be produced. A frequent misdirection of a speculative mania is in the creation of fixed works which are not at the time remunerative to those who make them ; but where the growth of population is rapid, the fixed works thus produced in excess are frequently found to have been merely premature. A period of languor follows in which production is at a minimum, but a certain benefit remains to be enjoyed from the past production. On the other hand the contraction of business and multiplication of insolvencies which constantly-falling prices produce, seem to be without similar compensations. The tendency is not merely to keep the energies of a community from being misdirected, but to limit the production of the right things as well. Possibly there may be a compensating gain which it would be wholly impossible to trace in the

enforced industry and prudence of a community constantly struggling with falling prices. The education in the end will be wholesome. But at the time there is a check to production which does not exist in periods of rising prices.

It is just possible, however, that at a time of falling prices, accumulation may be less checked than production. The production may be less, but consumers being more careful the accumulation may remain as great as ever. A time of falling prices may thus not be as unfavourable to the growth of a community in wealth as it is to their whole prosperity. I doubt whether any community can accumulate so much with production at a minimum as with production at a maximum, but it is necessary that the distinct nature of the questions of accumulation and general prosperity should be kept in mind. Although it could be shown that accumulation is as great with falling or rising prices as with prices in equilibrium, it would not follow that it is indifferent whether prices do rise or fall. The differences in the means of material enjoyment may be very considerable, and should be taken into account.

The conclusion to which I have come seems to support the general opinion of the desirableness of having a money in use which does not change in value from period to period beyond the points within which changes of credit produce the usual oscillations. I should like, therefore, to qualify what I have said by the addition that probably the matter is not of first importance compared with other hindrances or facilities to economic production. Too much must not be made of the effect on industrial production of changes in the amount of money. Compared with such influences as good or bad harvests, wars, and the like, or the waste caused by indulgence in alcohol or other extravagances, the changes in money, except those of the most extreme kind, must be

insignificant. The desirableness of having an unchanging money is therefore only relative. It is not an object to be sought at all hazards, but a very secondary one. It must not be sought, especially, at the risk of destroying the ends for which a community has a money at all. If the world in future is to have permanently rather a deficient supply of the precious metals, it is better to face the evil with a standard money such as that of England now is, however it may appreciate, rather than attempt a new experiment. It would be out of place to go into a statistical argument here, but I should doubt if even a general fall of 10 per cent. in prices is probable within the next ten years owing to a scarcity of gold, provided there are no new extraordinary demands, and without a fall of that extent in ten years it is doubtful whether the resulting evils—at least so far as the accumulation of wealth and general prosperity are concerned—are likely to be appreciable. If gold is to appreciate in future at no greater rate than this, I cannot admit that the consequences will be at all fatal to production.

It is equally clear, however, that if it is preferable to abide by a good standard money, and face the evils of appreciation and depreciation, to which it is naturally subject, it is undesirable to produce artificially the evils which do result from appreciation or depreciation when at all sensible. This has long been admitted, I may say almost universally, by the great English writers on currency. Against all the arguments that inconvertible paper will make money abundant, raise prices, and stimulate production, they have set their faces steadily. And their objections apply equally to any arrangement for making metallic money abundant which is the basis of the most commonly used arguments of bi-metallists. They also apply of course to all projects for artificially raising the denomination of a money of the precious

metals. A forced appreciation of the currency of a country will have many injurious consequences, apart from all other objections there may be to the measure ; and these consequences will be injurious in proportion to the degree of economic advancement which a country happens to have attained. In a country like England they would be intolerable, and a sudden appreciation of money by 10 or 20 per cent. in such a country without adequate motive is to be deprecated. Such an adequate motive may be admitted where the problem has been to bring inconvertible paper which has got to a discount up to par, and then to resume specie payments ; but without a motive like this an appreciation of the money of a country forced on by a Government is simply a measure for disabling the productive powers of the people, and making them poorer than they would otherwise be, while it is liable, of course, to all the objections which exist to any measure that changes the contracts between individuals.

[1879.]

IV.

BANK RESERVES.

IN a recent animated correspondence in the money market columns of the *Times* on the subject of "Bankers' reserves," almost all the contributors, including present and past bank managers, private bankers and others, have acknowledged that the banking system of Lombard-street, taken in the aggregate, has not the strength that would be given by an adequate cash reserve. But dispute arises as to where the blame of the defect is to be cast, representatives of the banks outside throwing the responsibility on the Bank of England, and others on these outside banks themselves. Our own view inclines to the latter side ; but the subject deserves the most careful discussion, and we think it will be useful to explain the facts and their various bearings while avoiding, if possible, any heated controversy. The matter is evidently one for calm and scientific treatment, while the time [1881] is also suitable for discussion and for action, seeing that credit is good and there is no fear of engendering uneasiness in the public mind, as there might be when the money market is disturbed.

To make the controversy popularly intelligible we must go back to the very elements of monetary science and banking practice. There are two principles which all will understand ; first, the economy of money and of capital in its widest sense, which is effected by means of deposit banking —by people placing their working cash, or cash which is

awaiting investment, in banks, and by the banks employing the surplus over and above what is necessary to meet the varying wants of their customers from day to day ; and second, the necessity which is laid on bankers, especially on bankers who conduct their business, as in England, on the principle of undertaking to repay the money deposited with them at call or short notice, of not only employing the money in such a way as to be readily convertible into cash, but of keeping such a sum in actual cash somewhere that no one can have a reasonable doubt of any actual demand for cash which is at all likely to arise being met, and more than met. As regards the first principle there is, of course, absolute agreement. A given quantity of the precious metals is made to do infinitely more work by means of banks than it would do if there were no banks, while by the refinement of banker's Clearing Houses and cheques a cheap and inexpensive mechanism suffices for the secure settlement of a volume of transactions which, perhaps, could not take place at all without it. The magnitude of modern business is, in fact, rendered possible only by means of a banking system like that which exists in this country and in the United States, and in a less developed form in France and Germany. As regards the second principle, there is also no disagreement in theory. Every writer of authority, and every banker in practice, so far as we know, acknowledges the necessity of an actual store of cash somewhere in every banking system. It has not always been so, banking having grown up gradually, and each banker at first having trusted, and rightly trusted, to keeping sufficient sums in his own till for ascertained wants, and sufficient securities which he could sell for cash if there was any run upon him ; and the question of whether that cash could be obtained at all not having become a practical one until everybody kept a banker. But practically for many

years the necessity of a cash reserve somewhere has been acknowledged by bankers, and especially by the leading bank in this country, the Bank of England; and since Mr. Bagehot's "Lombard-street" the recognition of this necessity has become part of the accepted theory of banking. Its soundness is mathematically demonstrable. You cannot have a class of men in a business community undertaking vast liabilities to pay in cash at call or short notice without some guarantee beforehand that sufficient cash will be forthcoming for all probable demands. It is plain that if an accident should arise to make all the depositors want cash at once they could not have it; the thing would be an impossibility; but probable demands can be provided for, with a margin over, and that is all that is necessary to make a banking system safe. But while the theory is accepted there are all sorts of differences about the application, as the present controversy bears witness. How much reserve is to be kept, and who is to keep it, are unsettled problems in the existing practice of the English money market. The Bank of England is to blame, say some; the banks outside, say others; while a few profess to be quite satisfied with things as they are. There is a whole class of institutions in Lombard-street—the discount houses—whose business would be vitally altered if the existing practice were to be changed.

As to whether the existing practice is satisfactory, we think, also, there can be no doubt. There is practically no reserve of actual cash anywhere in this country in the sense in which the word "reserve" is properly used, except what is called the reserve in the banking department of the Bank of England, which now amounts to the sum of £10,800,000. If any merchant or foreign banker in this country wants a hundred thousand sovereigns to send to Egypt, or Brazil, or the Cape, or the United States, the only place where he can

get the sum is the Bank of England. He may draw a cheque on his own banker, but the banker draws a cheque in turn either directly on the Bank of England, or indirectly through some other banker or discount house which draws on the Bank of England, and so the want is supplied. What is a still more serious matter, if there is a run upon any bank, or apprehended run, it is the same store which is drawn upon. A banker in the provinces may not even have a banking account with the Bank of England, but he draws on his London agents, perhaps supplying them with securities to sell on the Stock Exchange, and the cash is actually taken in the end from the Bank of England. The London agent if he holds a balance at the credit of the country banker draws a cheque directly and obtains notes and coin from the Bank of England which he sends to the latter; if securities have first to be realized, the Stock Exchange dealer who purchases gives a cheque on his own banker, who in turn draws on the Bank of England if the sum is of any magnitude, and so the drain of cash, however roundabout the operation, ultimately falls upon the Bank of England. Very likely, indeed, the Stock Exchange dealer has to borrow the money, which he does of his own banker, the banker in turn calling in money from the discount house and the latter borrowing from the Bank of England, so that the strain, by our present practice, falls in a double way upon the latter institution. People who do not even keep accounts with it can compel others to borrow from it, and so they obtain the cash they want. In these ways the cash kept in the banking department of the Bank of England, which is less than eleven millions at the present moment, is the sole guarantee for the immense liabilities of the banking system of the country; and to say this is to prove the defect of the present system. The liabilities are to be reckoned by

hundreds of millions. Some years ago the total deposits of the banks of the United Kingdom were reckoned at £600,000,000, and they must now be more, while there is an immense contingent liability through the facility with which people can borrow on security, and so get money placed to their credit against which they can draw cheques. The deposits of the various banks with head offices in London alone exceed £100,000,000. To have £10,000,000 in actual cash for all this fabric of credit is palpably too little. Nor is this mere theory. Three times since 1844,—in 1847, in 1857, and again in 1866—the banking department of the Bank of England has been nearly exhausted and there has been great apprehension and panic, and although the amount of the reserve when apprehension began was less than £10,000,000, it cannot be said that it was less than it is now relatively to the engagements of the time. Since 1866, the date of the last panic, the volume of transactions has grown immensely. More recently, in 1878, after the failure of the City of Glasgow Bank, there was a steady pull from the country bankers upon the reserve of the Bank of England, which would undoubtedly have given rise to similar apprehension, and which it would, perhaps, have been impossible to meet, but for the Continental exchanges being in our favour at the time and the money market generally easy. The liability of the reserve under our present system to sink to £10,000,000 or less is in fact a constant source of irritation and uneasiness in the market and is an utterly indefensible defect of that system.

But who is to blame? And what remedy is there to be? In answering this question we come to the gist of the present controversy, which becomes almost too technical for popular handling; but we are not without hope of being understood. But for some peculiarity in our system, we think, no one

would question at all the responsibility of the leading banks of the metropolis, whether joint stock or private. With the exception of a supremacy or suzerainty lodged with the Bank of England, which we shall notice presently, they are at the head of a hierarchy of banks; they are the bankers of all other banks throughout the country, partly in a direct and partly in an indirect manner; upon them, if any, but for the Bank of England, the brunt of any panic or shock to credit would fall. If there were no such hierarchy as what actually exists, each bank, whether in the country or in London, would have to stand by itself; but when metropolitan banks accept the agency of other banks and become the bankers of banks they accept the full responsibilities of the position, one of which is the provision of actual cash for any emergency. There is, of course, no written law to this effect, but usage in such matters is even more imperative than written rule. We have not a word to say, we may explain, against this hierarchical system itself. On the contrary, it appears to us a great economy that there should be a system of principal and dependent banks, such as appears to grow up naturally in every country where the banking system is at all developed. But the essence of such a system is that the principal banks should accept the responsibility of either keeping a reserve themselves or getting it kept somehow; and hence as the cash reserve of the English banking system is generally acknowledged to be too small, and is palpably too small, the defect would be naturally charged on the leading London banks, if there were no other peculiarity in our system. But for such peculiarity no one would even dream of questioning their responsibility. The Associated Banks of New York actually do keep their own reserve, and so would the London banks in the absence of any peculiarity in the English money market.

But there is a peculiarity in our market, and in this lies both the secret of the actual weakness of our reserve and the unwillingness of the leading London banks to accept their responsibility. Side by side with them, and beginning in the days when there were no joint-stock banks, and when the banking world of London was relatively much smaller compared with the Bank of England than it is now, there has grown up a set of institutions—the discount houses and bill-brokers—avowedly keeping no cash, professedly dependent on the Bank of England when they do want cash, and yet transacting what is really banking business to an enormous extent—that is receiving deposits at call or short notice on the one hand and discounting bills or making advances on securities on the other hand. These institutions in the old times were, in fact, another step in the banking hierarchy, connecting the various banks in the country with the Bank of England, and in that way making the latter bank supreme over all the others and the possessor of the sole reserve. The idea itself was not an unsound one, tending to effect an even greater economy of cash than if all the leading banks of a metropolis were to keep their own reserves; but the effect has been that with the growth of the banking system generally the leading London banks, which have been growing up into a position of equality with the Bank of England as far as banking business, apart from note issues, is concerned, and perhaps even into a position of superiority to the Bank of England, have allowed themselves to remain dependent upon the discount houses and bill-brokers, just as when they were small and dependent banks. They deposit their surplus cash with these discount houses and bill-brokers just as if they were dependent and not leading banks, and treat the money so deposited at call as if it were cash, which would be quite a proper thing to do if they were dependent;

but which appears to be quite improper and dangerous, looking to their real position in the banking hierarchy. The effect necessarily is that our leading banks make themselves virtually dependent on the Bank of England. They deposit with banks which are avowedly dependent on the Bank of England, and so they in turn are dependent. This would probably answer well enough even now if the Bank of England could and would undertake to keep an adequate reserve for them, but the business of the discount houses and bill-brokers has itself grown so large in relation to that of the Bank of England that this seems no longer possible. Instead of remaining an overwhelmingly great institution with a crowd of little banks and bill-brokers, from whom it takes a varying amount of business, dependent upon it, the Bank of England has been jostled out of the market by its big competitors, and only obtains a small margin of business when the reserve of cash in the market falls short and the discount houses and bill-brokers resort to it for advances. The Bank of England, in other words, cannot keep a sufficient reserve for all the wants of our banking system, because it has not the ordinary business and cash of the market. It is sometimes said, indeed, that the Bank of England employs the bankers' money, for they all keep accounts with it for Clearing House purposes, and the money so deposited with the Bank is treated by it like any other deposit; but we fail to see how this proves that the Bank fails to discharge its legitimate obligations. Strictly speaking, the cash deposited with it is not the reserve of these banks, but money deposited for a special purpose, and it is not to be expected to keep any one's cash for nothing. We come round then to the fact that the leading London bankers, being primarily responsible for keeping a cash reserve, fail to do so, by making themselves dependent on the bill-brokers and

the Bank of England just as if they were dependent banks themselves, which they are not and cannot be.

Strictly speaking, of course, the Bank of England is a partner with the discount houses and the outside banks in maintaining this vicious system. By conforming to the usage of always lending to the discount houses and bill-brokers when they are pinched,* it releases the outside banks from the necessity under which they would otherwise lie of keeping a cash reserve for themselves, and it undertakes virtually to enable these outside banks to act as dependent banks, while it has not the means, as we have seen, of enabling them to do so. But the partnership of the Bank of England in the matter is especially difficult to throw off. The usage of supplying the discount houses and bill-brokers in time of need is of old standing, and if the Bank of England were to seek to depart from the usage it would incur great odium. Perhaps it could only do so by letting a discount house with good securities to offer stop payment, and in a system of credit such action would be impossible. The Bank of England would be accused of endangering the credit of the country itself, and in the popular view it would be no excuse that it had given fair warning of its change of policy.

If this account of the matter be correct, the question of a remedy really requires very little discussion. The institutions which are primarily responsible, as we have seen, are the leading London banks, and they have the remedy in their own hands. All they have got to do is to cease depositing as much money as they now do with the discount houses and bill-brokers, and they can compel the mainte-

* A few years ago, since this paper was written, the Bank of England restricted its accommodation to the discount houses in this respect. But not sufficiently so, I fear, to warrant a modification of the text.

nance of a larger reserve. To maintain the economy of the present system they would do so by increasing their deposit with the Bank of England; but if they have any fear of the Bank of England lending the money, and not keeping sufficient cash, their simple plan would be to lock up the money, either in a separate vault at the Bank of England, as some correspondents have suggested, the Bank receiving compensation for the work, or in a vault of their own, entirely under their own control. No doubt one result would be that these banks would have to reduce the dividends to their shareholders or the allowances they pay to their depositors; but that they would have to adopt one or other of these alternatives, and especially that they would have to adopt the latter, is rather an argument for their keeping their own cash reserves. The practice of banks paying interest on deposits has grown to a dangerous height. Because they pay interest they are forced to invest and lend "up to the hilt" so as to earn the interest; and, as was seen in 1875, the consequences are sometimes disastrous. A smaller business with larger cash reserves would be a better thing for some of our great banks than business on the present scale with its defect of an insufficient cash reserve. The present would be a good time for altering the vicious practice which is now followed. Let the leading banks meet together, agree how to keep a cash reserve for themselves, and put an end to their present unworthy and unsatisfactory dependency on the discount houses and bill-brokers, and, through them, on the Bank of England.

There are, of course, other questions involved in this discussion, such as the right of note issue. If all banks, for instance, were free to issue notes on demand, instead of the Bank of England and a few provincial banks enjoying a restricted monopoly, the resources of the leading banks,

participating in the note-issue, might be so increased that they could better afford to keep a large cash reserve. This is only one of many conceivable suggestions that might be made. But on such issues we give no opinion at present. We have been dealing with the question in a practical spirit, and any changes involving legislation, and, as a preliminary to legislation, the revival of currency discussions, are, of course, not within the range of practical consideration. The one thing now to keep in view is that the defect of the present system is curable in the most simple manner by those who are mainly responsible for that defect. [1881.]

V.

THE FOREIGN TRADE OF THE UNITED STATES.

IN the recent discussions about "fair trade," one of the stock arguments of the fair traders has been the marvellous growth of the foreign trade of the United States. In some way or other it seems to be assumed that the growth of the foreign trade of a country is a complete index of its prosperity, and that this prosperity can be assigned without more ado to the measures and policy of the Government, no reference being made, as one would naturally expect, to the special trade causes, the demand on one side and the natural means of supply on the other, which must always be more important than the mere action of governments. But while the folly of this fair-trade argument is apparent on the surface, the facts on which it is based appear really to be most remarkable, and to call for some account of their real nature and causes. The growth of the foreign trade of the United States in recent years, as of so much else in that country, has been one of wonderful rapidity.

If we go back to 1840 and take the amounts of the trade at ten years' intervals from that date we get the following record of progress:—

STATEMENT OF THE FOREIGN TRADE OF THE UNITED STATES IN THE YEARS 1840, 1850, 1860, 1870 AND 1880 (in thousands of pounds).*

Year.				Imports of merchandise.	Exports of merchandise.
				£	£
1840	.	.	.	19,652	24,734
1850	.	.	.	34,702	28,875
1860	.	.	.	70,723	66,715
1870	.	.	.	87,192	78,554
1880	.	.	.	133,591	167,128

Since 1840 the increase in the imports amounts to about £114,000,000 and in the exports to about £143,000,000, the percentage increase in the one case being about 600 per cent., and in the other about 570 per cent. The percentages of increase in a country like the United States are not, perhaps, to be regarded, the population increasing so fast and the total foreign trade being still less than that of the United Kingdom, where the population is only between three and four-fifths of that of the United States; but the amount of the increase speaks for itself. The greater part of the increase was in the last decade—viz., between 1870 and 1880, when the imports increased £46,000,000, or more than 50 per cent., and the exports £89,000,000, or more than 100 per cent., on the totals of 1870. Between 1860 and 1870 there was comparatively little progress—the consequence, it may be assumed, of the great civil war which raged in the interval.

In dealing with the totals of a country's foreign trade, the correct course in most cases would be to include the imports and exports of specie with those of the merchandise. Specie

* Throughout this article, except where specially noted, we have taken figures of specie values only from the United States official statistics, and we have converted the dollar into sterling money at 4s. per dollar.

is really merchandise in international trade. But, whatever may be the correct course generally, it is certainly necessary to do so in the case of the United States, which has been a producer of the precious metals since 1850 and an exporter of these metals for the greater part of the period since then, while in the last few years the restoration of a bullion standard and return to specie payments have led to a large reflux of one of these metals—gold—to the country, so that there was less demand for other imports. Including the specie then, with the above figures, we get the following totals:—

STATEMENT OF THE FOREIGN TRADE OF THE UNITED STATES, INCLUDING SPECIE, IN THE YEARS 1840, 1850, 1860, 1870 AND 1880 (in thousands of pounds).

Year.				Imports of merchandise and specie.	Exports of merchandise and specie.
				£	£
1840	.	.	.	21,408	26,417
1850	.	.	.	35,628	30,379
1860	.	.	.	72,433	80,024
1870	.	.	.	92,275	90,185
1880	.	.	.	152,200	170,576

Here the increase in amount in the imports between 1840 and 1880 is much greater than when we left out the specie, being £131,000,000 instead of £114,000,000 only; but the increase of the exports remains much the same, being £144,000,000 instead of £143,000,000. The increase in the imports is thus rather more astonishing than the increase in the exports in the history of the last 40 years in the United States. The amount of the increase is not very much less than the amount of the increase in the exports, and the percentage of the increase is much greater, being about 610 per cent., as compared with an increase of 560 per cent. only in the exports. The increase in the last decade is again most

remarkable, being £60,000,000, or about 65 per cent., in the imports, and £80,000,000, or about 90 per cent., in the exports, the progress of the imports, it will be observed, as is the case for the whole period between 1840 and 1880, being much greater when we include the specie than when we leave the specie out.

The above figures are those of the total imports and exports, the imports including what is imported for re-export, and the exports including these re-exports. The re-exports in the case of the United States are very small, but the exact figure of the exports of domestic produce may be stated:—

EXPORTS OF DOMESTIC PRODUCE OF THE UNITED STATES IN THE YEARS 1840, 1850, 1860, 1870 AND 1880 (in thousands of pounds).

Year.	Merchandise.	Bullion.	Total.
	£	£	£
1840 . . .	22,332	447	22,779
1850 . . .	26,980	409	27,389
1860 . . .	63,248	11,389	74,637
1870 . . .	75,323	8,777	84,100
1880 . . .	164,789	1,869	166,658

From this it will be seen that the entire increase in the exports is in the exports of domestic produce, and that the large increase in the exports of “merchandise” between 1870 and 1880 was to some extent a displacement merely, other products being sent abroad instead of the gold and silver produced in the States. There could be no better illustration of the necessity for including in the accounts of United States trade the imports and exports of bullion. To take the increased exports of merchandise alone would give a false idea of the increase of the exports of American produce. The £11,389,000 of gold and silver of domestic produce exported in 1860 and the £8,777,000 exported in 1870 were

as much a product of American capital and labour as any other export of domestic produce, and the fall in those exports between 1870 and 1880 should of course be set off against the increase in the exports of merchandise so called.

To complete the account, and facilitate a comparison with the figures for the United Kingdom which we propose to make, we add a note of the amount of imports and exports per head of the population at the above dates:—

IMPORTS AND EXPORTS OF THE UNITED STATES PER HEAD IN 1840, 1850, 1860, 1870 AND 1880.

Year.	Imports.		Exports.	
	Excluding Specie.	Including Specie.	Excluding Specie.	Including Specie.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1840	1 3 0	1 5 2	1 9 1	1 11 1
1850	1 10 0	1 10 9	1 4 11	1 6 2
1860	2 5 0	2 6 1	2 2 7	2 10 11
1870	2 5 4	2 8 0	2 0 9	2 6 11
1880	2 13 3	3 0 9	3 6 8	3 8 1

Looked at in this way, the figures are, perhaps, a little less surprising. Including specie, which is the proper way, as we have seen, to treat the American trade, the imports show an increase between 1840 and 1880 of £1 15s. 7d. per head, or about 140 per cent., instead of over 600 per cent. when we reckon by amounts only; and the exports show an increase of £1 17s. per head, or rather less than 120 per cent., instead of 560 per cent. when we reckon by amounts only. It will also be seen that there is actually a decrease of the exports, reckoning per head, between 1860 and 1870, and a very small increase of the imports, while the increase between 1870 and 1880, per head, amounts to about 25 per cent. only in the imports, and to rather less than 50 per cent.

only in the exports, this last increase being also very palpably, to a large extent, a recovery from the depression between 1860 and 1870, which affected the exports more than the imports. Curiously enough, the excess of exports over imports, which was 5s. 11d. per head in 1840, was still in 1880 about 7s. 4d. per head only, substantially very little difference in the 40 years, notwithstanding the great increase in the figures of the imports and exports themselves, although meanwhile there has been at different times an excess of imports.

Such are the figures of the United States foreign trade for a period of 40 years; but, wonderful as they are, it will be found, we think, that it is only when they are looked at in a certain way and for a short period only that the progress appears at all greater than that of the United Kingdom. A proper comparison shows the progress of the latter country to be by far the most remarkable. We begin with a comparison of the exports of British produce only. The *data* for the imports unfortunately only go back to 1854, when computed were substituted for the old-fashioned and utterly untrustworthy official values; and this defect extends, of course, to the re-exports. The figures for exports of British produce have, however, been declared values from 1840 downwards, and these figures are:—

EXPORTS OF BRITISH PRODUCE.

Year.	Amount in Thousands of Pounds.	Per Head of Population.
	£	£ s. d.
1840 . . .	51,309	1 18 9
1850 . . .	71,367	2 11 10
1860 . . .	135,891	4 14 7
1870 . . .	199,586	6 7 11
1880 . . .	223,060	6 9 5

Thus the *increase* between 1840 and 1880 is £172,000,000, or more than the total exports of the United States, bullion and specie together, and including re-exports in the latter year! As the total of our exports in 1840 was more than double those of the United States at that time, our progress has thus been much the more remarkable. The comparison per head of population is yet more striking, as might be expected from the greater relative increase of population in the United States. The increase between 1840 and 1880 is from £1 18s. 9d. to £6 9s. 5d. per head, or £4 10s. 8d. per head, which latter figure is actually £1 2s. 7d. per head more than the total exports of the United States per head in 1880.

Our increase in the forty years is thus about 30 per cent. greater than the trade of the United States at the present time. It may be sufficient to put the figures of the exports per head together :—

EXPORTS PER HEAD OF THE POPULATION OF THE UNITED KINGDOM AND UNITED STATES, COMPARED AT DIFFERENT DATES.

Year.	United Kingdom, Exports of Domestic Produce only. Exclusive of specie.			United States. Total Exports. Inclusive of specie.		
	£	s.	d.	£	s.	d.
1840 . . .	1	18	9	1	11	1
1850 . . .	2	11	10	1	6	2
1860 . . .	4	14	7	2	10	11
1870 . . .	6	7	11	2	6	11
1880 . . .	6	9	5	3	8	1

The distance between the United Kingdom and the United States is thus much greater at the close than at the beginning of the period, and has been an increasing one in each decade, except between 1870 and 1880, in which the increase in the exports of the United Kingdom per head was much less than that of the United States. We have already, however,

drawn attention to the fact of the special arrest of the United States trade between 1860 and 1870, which we assumed to be due to the war. During the same period English exports advanced enormously, and when we compare 1860 and 1880 together, we find the increase per head in the exports of the United Kingdom to be double that of the United States. The great increase of United States exports in the last decade is thus a special phenomenon, and presumably indicates largely the recovery of the country from the effects of the war.

Turning to the imports, we find that the figures of British trade to be compared with those of the United States are as follow :—

IMPORTS INTO THE UNITED KINGDOM, EXCLUSIVE OF SPECIE (in thousands of pounds).

Year.	Amount.	Per Head of Population.
	£	£ s. d.
1855* . . .	143,542	5 3 2
1860 . . .	210,531	7 7 0
1870 . . .	303,257	9 14 4
1880 . . .	411,229	11 18 7

Thus the imports have increased between 1855 and 1880 by the large sum of £268,000,000, or more than double the increase of the imports of the United States, inclusive of specie, between 1840 and 1880. Here, also, the increase has been as great in the last decade as any previous one, being £108,000,000, as compared with an increase of £60,000,000 in the case of the United States. We

* We have computed values of the imports into the United Kingdom from this date only. Previously there were only official values, which were worthless.

add, as in the case of the exports, a comparison of the amounts per head of the population of the United Kingdom and the United States respectively, showing still more remarkably the superior progress of the United Kingdom:—

IMPORTS PER HEAD OF THE POPULATION IN THE UNITED KINGDOM
AND UNITED STATES RESPECTIVELY.

Year.	United Kingdom. Exclusive of Specie.	United States. Inclusive of Specie.
	£ s. d.	£ s. d.
1840 . . .	..	1 5 2
1850 . . .	..	1 10 9
1855 . . .	5 3 2	..
1860 . . .	7 7 0	2 6 1
1870 . . .	9 14 4	2 8 0
1880 . . .	11 18 7	3 0 9

Thus the imports per head of the population in the United Kingdom are nearly four times those of the United States, and the increase since 1860 alone has been £4 11s. 7d. per head, or 50 per cent. more than the total imports in the United States per head at the present time, which are only £3 0s. 9d. per head. As we have seen, our exports per head are still nearly double those of the United States, in spite of our slower relative progress between 1870 and 1880, and although all the United States exports are “visible,” while in our own case we really export a large produce in an unrecorded form in the shape of labour and other expenditure in carrying goods in our ships for the rest of the world. But in imports, which we maintain to be the better test, our business is really four times that of the United States, and has increased at an immensely more rapid rate.

Of course, it ought to be considered in all these figures that imports and exports in the case of the United Kingdom and the United States mean slightly different things. Our

exports of British produce, so-called; really include a great deal which is not British produce, much more in proportion than what is not American produce in the case of American exports, because we import so much raw material to be manufactured for export. Our imports, also, are not so much, as in America, imports for final consumption; but, probably, we re-export £100,000,000 or more of them—over £60,000,000 directly and the remainder in the indirect form we have referred to. But, making all allowances and reckoning per head, there can obviously be no question both of the greater magnitude of our foreign trade as compared with that of the United States and of its more rapid progress.

The one novel fact in the case of the United States is the rapid increase of the exports in recent years. We have to draw attention, however, to the fact, which is especially important in a comparison with the United Kingdom, that the increase in the recorded exports of the United States is probably neutralised to some extent by a decrease in what we have referred to in the case of England as the unrecorded exports—viz., those which are made in the shape of labour and other expenditure in the business of carrying goods on the ocean. The United States, being formerly a large ship-owning country, exported part of the produce of its labour as we do now, not in a finished form—a product which could be recorded at the Custom House as an export—but in the incomplete form of the hire of its ships and the seamen navigating them, which is not recorded as an export. Having now become less of a ship-owning nation, it must, to obtain the same result in the shape of imports it would otherwise obtain, export more largely in a visible form. If the United States, in other words, had increased its ship-owning, its recorded exports would have increased less, if its imports were what they are now. That this is not a mere theory is

palpable enough when we refer to the shipping statistics of the United States. The tonnage of the American mercantile marine in the foreign trade has diminished as follows in the last few years:—1870,* 1,449,000 tons; 1875, 1,515,000 tons; 1880, 1,314,000 tons. Thus, in spite of a steady increase in the imports and exports, the foreign shipping belonging to the United States has rather diminished, and the result must accordingly have been an increase in the visible exports which would not otherwise have been necessary. The difference thus arising is probably enormous, as we perceive at once when we consider the magnitude of the entries of shipping in the direct foreign trade of the United States. These have progressed as follows:—

Year.	Total entries.	Of which.	
		American only.	Foreign.
	Tons.	Tons.	Tons.
1860	5,000,194	3,301,903	1,698,291
1870	6,270,189	2,452,226	3,817,963
1880	15,239,534	3,128,374	12,111,160

Thus between 1870 and 1880 there has been an increase of the entries of ships at United States ports in the foreign trade of that country amounting to 9,000,000 tons, of which only 676,000 tons have been American, the remainder being foreign. Consequently, the United States have had to pay other countries for carrying their goods, and this is one reason why their visible or recorded exports have increased. The clearances being equal to the entries, there is an increased movement of 16,000,000 tons in the foreign trade of the United States in the 10 years, belonging exclusively to

* We do not go farther back than 1870, as there appears to have been a change of the system of measurement between 1860 and 1870.

foreign ships, which at only £1 per ton would have made a difference of £16,000,000 in the exports. The United States, if they had been more largely ship-owning, and in that form had done £16,000,000 worth of work more than they have done, would have needed to export in a visible form £16,000,000 less than they are now annually exporting. In other words, much of the increase of the United States exports in recent years is simply to be accounted for by the fact that it does less and less of a ship-owning business in proportion to its other business than it did.

Another curious fact may also be referred to as an additional proof. The United States in their statistics profess to distinguish between the value of their exports carried in their own ships and those carried in foreign ships. It appears that while in 1870 American ships carried £36,000,000 of the exports from America and foreign ships £75,000,000, the amount carried in 1880 in American ships was £22,000,000 only, while the amount carried in foreign ships had risen to £144,000,000. No wonder that the recorded exports should increase largely, the Americans having so much more carriage to pay for.

These being the facts of United States trade in recent years, we are in a position to appreciate the claim of the protectionists to have it held that an exceptional increase in United States trade is a proof of the exceptional advantages of protection. In point of fact, the trade of that country has not increased exceptionally. By far the most striking illustration of increase is still presented by the United Kingdom, the great free-trade country, and the United States are really nowhere in the comparison. This increase in our own case is also the more remarkable, because, being a ship-owning nation, we export largely in an invisible and unrecorded form which a nation less markedly ship-owning does

not do. What is really novel and exceptional in the United States increase is an increase of exports in the last few years which would probably have been much less than it is but for the simultaneous loss of its ship-owning business. This special increase, therefore, is not an increase which can be ascribed to the advantages of a protective *régime*, but it is to be counted with the disadvantages; it is a sign, and nothing more, of the influence of protection in killing the industry of ship-owning along with other industries. Our own visible exports would, no doubt, increase, and that enormously, or our imports would decrease, if we, too, were to kill our ship-owning industry by protection, and the carrying of our foreign trade were to fall into other hands.

There are some other facts in American trade, however, which show how little protection has to do with the expansion of the exports. The expansion is exclusively in unprotected articles—mainly cotton, grain, meat, and provisions. The figures on this head are, indeed, very striking:—

EXPORTS OF RAW COTTON, GRAIN, MEAT, AND PROVISIONS FROM THE UNITED STATES IN 1870–80 (in millions of lbs. or bushels for quantities and millions of pounds sterling for values):—

QUANTITIES.

Year.	Cotton.	Wheat.	Indian Corn.	Bacon & Hams.	Fresh Beef.	Butter.	Cheese.
	lbs.	Bushels.	Bushels.	lbs.	lbs.	lbs.	lbs.
1871	1,463	34	10	71	..	4	64
1872	934	26	34	246	..	8	66
1873	1,200	39	38	395	..	4	80
1874	1,359	71	34	347	..	4	91
1875	1,260	53	29	250	..	6	101
1876	1,491	55	49	327	..	5	97
1877	1,445	40	71	460	49 *	21	107
1878	1,608	72	85	592	54	22	124
1879	1,628	122	86	732	54	38	142
1880	1,822	153	98	759	85	39	127

* Not separately stated before 1877.

VALUES.

Year.	Cotton.	Bread and Breadstuffs.*	Provisions.†	Total.
	£	£	£	£
1871	44	16	8	68
1872	36	17	12	65
1873	45	20	16	81
1874	42	32	16	90
1875	38	22	16	76
1876	38	26	18	82
1877	34	24	25	83
1878	36	36	25	97
1879	32	42	23	97
1880	42	58	25	125

NOTE.—This table does not quite compare with the figures as to American exports above given, which were all specie values. Here they are mixed gold and currency. The apparent increase here shown is thus less than the real increase according to specie values.

Thus, about three-fourths of the increase of American exports which took place between 1870 and 1880, amounting to £80,000,000, is accounted for by the increase in the above articles alone; and probably a still larger part of the increase is really accounted for in this way for the reason stated in the above note. In other words, the increase in United States exports is not only what it is on account of protection having killed shipowning in the United States, but it is exclusively in articles where the United States has natural advantages, to which it gives no protection, and to which a *régime* of protection would do no good, though it might do harm. What is still more to the purpose, perhaps, is the increase in articles of which the United Kingdom is the largest consumer. It is the demand of the free-trade country which has attracted the supply from a protectionist

* Principally wheat and Indian corn.

† Including mainly bacon and hams, fresh beef, and butter and cheese.

country. The main reason for the growth of American exports is our being rich enough to buy.

Apart from the question between free trade and protection, however, a very important conclusion is suggested by the figures. Although the United States has hitherto progressed more slowly than we have done, and the rate is especially slow when we reckon per head of the population, yet, in fact, the aggregate value of its foreign trade may increase faster than ours on account of the much more rapid increase of a population which is already half as large again as that of the United Kingdom, and more. The exports of domestic produce *per head* are less than half those of the United Kingdom, but in aggregate value they are nearly four-fifths those of the latter country. In other years it may well be that the exports will still only be half those of the United Kingdom per head, but as the population will be nearly double, the aggregate value of the exports of each country will be the same. Even then there will still be some real distance between the United States and ourselves on account of our unrecorded exports, but at a point, it is plain, the United States can hardly fail to overtake us and export more, aggregate for aggregate, though not more per head. In the international trade of the world it is becoming a larger factor. It is the same with the imports. We now import annually per head about four times what the people of the United States import, but in the aggregate the United States imports are about one-third of ours. It may well be, then, that in other ten years the proportion per head will be much the same, but the population of the United States being double that of the United Kingdom, the aggregate foreign trade will be 50 per cent. and upwards that of ours. The next few years at the recent rate of progress must witness in this way a great change in the international position of the United

States. In another respect, also, the change will be a serious one. The whole of Western Europe, as well as the United Kingdom, is becoming more and more dependent on the United States for cotton and food, the increase in the imports from the United States being at least equal to the annual increase of population as regards food, while the world is as dependent on the United States for its whole supply of cotton as it was in 1860. In the next ten years what will happen will undoubtedly be, on the one hand, a great increase of the dependency of Western Europe, and principally the United Kingdom, on the United States for a necessary supply of food and raw material, and, on the other hand, an increased difficulty in the United States itself in finding an adequate outlet for those productions of which it has lately had so large a surplus to dispose of. As regards this last point, it is plain that if the United States in recent years has overtaken with its surplus the increase of population in Western Europe, then, as it has now a much larger population to start with than it had ten years ago, and the rate of increase is the same, or even greater, it will probably in the next ten years have a still more formidable surplus relatively to the increase of population in Western Europe to dispose of. In other words, then, an increase of the severity of American competition with European agriculture is certain, and Western Europe will also be more and more exposed to serious consequences if any climatic accident should happen to the United States harvest, or if there should be a political and social convulsion like that which caused the cotton famine. Whether it is wise in the nations of Western Europe to encourage or permit this dependency on a single foreign country appears to be a question remote enough from the habits of thought of our public men, but which may force itself on their attention at any moment in the most unexpected fashion. [1881.]

VI.

THE USE OF IMPORT AND EXPORT STATISTICS.*

I.—INTRODUCTORY.

WE must all agree in this place, I think, that there is cause both for encouragement and discouragement to us as regards the prospects of the study in which we are engaged in the very extensive use of statistics which some recent controversies have occasioned. I refer particularly to the balance of trade controversy, and the controversy between fair trade and free trade which made so much noise last autumn, but which has rather subsided of late, as questions of the kind are apt to do when trade itself is improving. In these controversies, which have run very much into each other, the fair traders having made use of the alleged balance of trade being against this country to support their arguments, the appeal has been very largely to statistics. Literary journals and magazines, which rather dread figures as a rule, have admitted them into their columns on a liberal scale, including even tables in the rough, as we should here consider them. But while this appeal to statistics is cause for satisfaction to us, the actual handling of the subjects of our study as been such, I think, as to prove how little it has really advanced,

* Read before the Statistical Society, March 21, 1882. The Tables in the Appendix referred to in the course of the paper will be found in the 'Journal of the Statistical Society' for June, 1882.

not merely amongst the multitude only, but amongst the classes who are most carefully and highly cultivated. There has been a great hash of figures, indicating that those who use them have hardly the rudiments of statistical ideas, whether true or false. In journals of the highest standing there are the wildest blunders of the schoolboy order. Thus in the 'Quarterly Review' of July last, a writer states and argues upon the statement: "It is estimated that about a million of acres of land have gone out of cultivation during the last ten years." * The fact, of course, is that there is not a year in the last ten in which the cultivated area of the United Kingdom has not increased, the total increase being nearly 2 million acres. The same writer also makes a great mess of the very figures of imports and exports with which I propose to deal specially to-night. He makes the excess of imports into the United Kingdom in 1879 £170,595,983, and in 1880 £187,179,530, and in the first five months of 1881 £78,782,396, having obviously omitted in all cases the re-exports of foreign and colonial merchandise, by which these figures would be reduced by 60 million pounds a year or upwards, while he quotes as his authority the *quarterly* returns of the Board of Trade, which issues no quarterly returns relating to imports and exports, but only monthly and annual returns.† Similarly a writer in the 'Nineteenth Century,' for August last, Sir Edward Sullivan, compares the property assessed to the legacy and succession duties in England with the property assessed to similar duties in France, which has no such duties at all, but which has only probate duties,

* 'Quarterly Review,' July, 1881, p. 282.

† Ibid., July, 1881, p. 288. It is just possible that the writer may refer to a quarterly account published at intervals in the monthly Board of Trade returns, but his allusion is so vague as to indicate that he has little idea what the publications are.

which are levied like ours on the gross amount of the estates of deceased persons, without deduction for debts, whereas our legacy and succession duties are imposed on the net amounts of property.* Similarly he speaks elsewhere of the "commerce" of the world having increased 36 per cent. in ten years, and English commerce so much less,† the actual fact being of course that there is no figure in existence which can be spoken of as representing the commerce of the world; while the writer probably meant the foreign commerce, and yet excluded from his comparison one of the most important parts of English foreign commerce, viz., the shipping. Our satisfaction therefore at seeing so frequent an appeal to statistics must be considerably qualified by the nature of the appeal. It is evidently still quite possible for essays to find admission to journals of high standing like the 'Nineteenth Century' and the 'Quarterly Review,' in which the writers not only make mistakes, but mistakes of an elementary and substantial character, as if in discussing chemistry a writer were to confound oxygen with hydrogen, or as if in discussing geometry he were to confound an isosceles with a right-angled triangle. Writers who were capable of making such mistakes in chemistry and geometry, however cultivated in other respects, would either not find admission to the pages of the 'Nineteenth Century' or the 'Quarterly Review,' or their mistakes would be corrected by the editors; but the popular standard for statistics is evidently as yet not so strict as it is for other scientific studies. Any man, it seems to be thought, can handle figures, and writers who are otherwise competent, are not afraid to touch them as they would be afraid to touch chemistry, or geometry, or botany, or geology, or almost any

* 'Nineteenth Century,' August, 1881, p. 173.

† Ibid., August, 1881, p. 172.

science one could name. That our special study should be so little advanced, although there is a dim idea in the public mind of the utility of statistics, must surely be a matter for concern to a Society which has been established for nearly fifty years for the express purpose of diffusing right ideas and information. We have still, it is plain, a great work before us to perform.

It is in this view that the present paper, which is mainly directed to the method of statistics, has been written. The object is to show how great may be the errors in using the comparatively well-known figures of imports and exports, unless proper caution is exercised, and how difficult it is to elicit true conclusions on the questions respecting the balance of trade and free trade *v.* protection, which have lately been discussed. Statistics, I need hardly say in this company, are almost always difficult. No table almost can be used without qualification and discretion. The moment we perceive that figures are used without qualifications and without anxiety to appreciate them in their right meaning, and to support no greater conclusion than they can be made to bear, we may be sure there is something wrong. My object will have been gained if the remarks I have to make, and the discussion they elicit, help to popularise what are really truisms within these walls, but which ought also to be truisms outside, if statistics held the place they ought to do among politicians and public men.

II.—GENERAL REMARKS ON IMPORT AND EXPORT FIGURES.

IN dealing with the causes of error in handling import and export statistics, it would of course be superfluous for me to do more than mention such questions of method as are common to them and all other statistics. In using them, as in other statistics, it is of course necessary to see that in comparing different years or different countries the data are substantially of the same nature. I shall have to notice some special difficulties of this sort in regard to imports and exports which I am aware of; but I am only at first noticing the principle as a well-known one. It is also necessary in comparing one period with another, so as to draw out a curve of progress or retrogression, to ascertain whether the figures of single years or of less periods can safely be used, or whether, as is more likely to be the case, the mean or average of groups of years ought to be used. For some purposes, as we know from statistics of crime, population, and the like, five, and even ten years' periods are by no means too long to be considered, and common sense will tell us that for many purposes this will also be the case with trade statistics, trade having ups and downs, if nothing else has, whatever *régime* it may be subject to, and the statistician's first business being to eliminate the errors which may be due to such ups and downs. A large discourse might be written even on these points, which are habitually neglected by popular writers who use statistics, and by persons of more authority. A question, for instance, was put by Mr. McIver last session,* to the President of the Board of Trade, the whole point of

* *Times*, June 14, 1881.

which was that our exports to France had diminished from 33 million to 28 million pounds in ten years, while our imports had increased from 30 million to 42 million pounds in the same period, and the explanation being that the apparent decrease in the one case and increase in the other corresponded only to temporary facts of trade, because the year 1871, owing to the Franco-German war, was of a wholly exceptional character as regards the trade between France and England. Another elementary difficulty is in the use of percentages, especially those of increase or decrease, nothing being more necessary than a cautious use of such percentages, and, especially when comparisons are made, a use of them only with reference to amounts as well as percentages. In the beginning of things percentages may be large, as we all know, but the real growth may be largest where the percentage is least, in consequence of the greater amount on which the percentage is calculated. We are all familiar here also with M. Quetelet's illustration of the enormous mortality of a particular street, in which nearly all the inhabitants died, and where the area was really too small to yield any good average. Some of the arguments of the 'Nineteenth Century,' already referred to as to the percentages of the growth of the commerce of different countries, are really as illogical. But elementary as this paper is intended to be, I may perhaps be excused from going into such extreme common-places, which relate not merely to imports and exports, but to all statistics. When these matters are properly attended to, enough remains to be considered as regards imports and exports which may well demand the utmost caution.

The *first* point to be considered, as in all statistics, is the degree of accuracy obtained in the original data. The figures of imports and exports are sometimes used, and we are all of us too apt to use them, as if they were figures in accounts,

giving rise to no question respecting the nature of the data; as if every particle of commodities and every pound of value sent out or brought into a country, and to and from what countries they were sent or brought, were recorded with perfect accuracy; and as if too the accounts of all countries, and of each country at different times, were made up on the same principles, and could be trusted to the same degree. Those who know anything of statistical compilation, and even those who do not know, if they only consider for a moment the necessary conditions, will perceive at once that no impression could be more unfounded. In all statistical inquiries the nature of the data is a necessary question, and there are great varieties in the possible degree of accuracy, while the same data may be sufficient for one purpose and not for another. Thus a census like that of the United Kingdom, made on the same day for the whole kingdom, by a staff of enumerators collecting individual returns from all householders, yields results which are absolutely trustworthy to a most infinitesimal fraction as regards the numbers of the people, as regards the sexes, as regards the conjugal condition, that is, whether married or not, and—with some exceptions perhaps—as regards the numbers at each age. The population of small localities on the day of the census may also be considered to be stated as regards all these details with practically complete accuracy. But when we come to such details as the occupations of the people, which involve inherent difficulties of statement by those who have to make the returns, and of classification by those who compile, we are plainly on more treacherous ground. Especially with the smaller occupations, and in comparisons between different localities, it would become necessary for inquirers to use the figures with judgment and discretion, and to bring to their aid a study of the instructions to the enumerators, and infor-

mation from local or special sources. In using the population figures again for deducing birth, marriage, and death-rates, the facts that the population returned is only the population on a given day, and that there are many localities in which the population on other days of the year would be less or more, has to be considered ; while the special birth, marriage, and death-rates themselves, that is the rates as compared with the population at particular ages, would be still more liable to error. There are methods for eliminating errors known to statistical experts by which the data can be used, but the methods must be employed if any good result is to be obtained. To give another illustration from matters within my own department—the emigration statistics. As far as numbers are concerned, these statistics are complete—we have practically a complete record of passengers leaving the country for places out of Europe, and returning to it from places out of Europe. Making the assumption, as I believe we may do, that the balance of the resident population is unaffected by people coming and going from and to European ports,—the excess of “imports” from such places, if I may adapt a well known expression to this subject, being practically all exported to places out of Europe,—the emigration and immigration statistics become perfectly trustworthy as to numbers. I think also the distinctions made as to the nationality and sex of the emigrants, and the conjugal condition, with the numbers of children, are fairly to be trusted. But when we get to the “occupations” I am not so sure. We have nothing to trust to but the description given by the emigrants themselves, as reported by officers who are busy with other work ; and I confess I should not like to found important inferences on minute changes in the numbers from year to year of so-called joiners, or painters, or farmers, or even “labourers.” It would be impossible to use the figures

for such details to any good purpose without much discretion and a wide knowledge of local facts determining the emigration. To take yet another illustration—again from my own department. While the total entries and clearances of ships at ports in the United Kingdom in the foreign trade may be held to be completely accurate, there is an undoubted defect in the statistics of particular ports, owing to the practice which has been established of only returning a vessel as entered and cleared at one port, though it may really enter and clear at more than one. By the present practice the total of the port accounts agrees with that of the United Kingdom, and I believe the trade of the ports generally is relatively fairly accurate, but the practice nevertheless might obviously lead to difficulty and wrong inferences in special cases. The nature of the data is thus an all important matter.

Now, as to the nature of the data in import and export statistics, we have the advantage of a paper in our own *Journal*, which Mr. Bourne read to us in 1871, and which will be found the first in his volume, "Trade, Population, and Food." A more useful paper, I think, was never laid before the Society, and I shall do little more than refer to it. Those interested will find a full account in it of how the data are obtained, and the means used to check them, with some critical observations on the main point I am now suggesting—the degree of accuracy of the data. There are many points in the paper and in the whole subject which in my official position I should hardly feel at liberty to discuss, but the main points are indisputable. The data, both as to quantities and values, with the countries of origin or destination, are derived from the declarations of importers in the case of imports, and of shippers in the case of exports, subject to a certain check by the customs' officers, and there

is a margin of error to be allowed for in these declarations. Mr. Bourne, as regards quantities only, compares the declarations in the case of dutiable goods imported with the actual weights or measurements subsequently made by the customs' officers, and points out a variation between the two ranging from 0·21 per cent. in the case of cocoa, to 5·70 per cent. in the case of tobacco, and averaging for all the articles 1·50 per cent. According to this, the declarations actually made, and which are the basis of all the statistics, are subject to such variations. They are no doubt checked by the customs' officers and corrected for the annual statement of trade, so that the limit of error is farther reduced, but in the case of non-dutiable goods some limit of error must remain. These are the facts as regards quantities only. As regards values, what Mr. Bourne points out as regards the imports is especially important:—

“The present system has great disadvantages, arising from the want of knowledge on the part of the importers, the indifference of many who pass the entries, and the impossibility of the department exercising a valid check. It is well known that a very large proportion of the goods sent to this country are on consignment, and not on purchase, in which case there is no invoice or statement of prices. In these cases the consignee is very much in ignorance of their quality or price, and therefore unable to fix a proper value until they have been examined and sampled. Where, again, as is very frequently done, the entry is made by a mere agent, who may gather the description of the goods from the ship's report, and estimate the weight from the nature of the packages; there is no guide at all to the value. In other instances there is great indisposition to let the true value be known. Supposing, as is constantly the case, wine to be brought from Hamburg in casks, branded with the mark of the best Spanish vintages, it is very improbable that, however vile the stuff may be, it will be valued at less than the price of good sherry. The greatest vigilance, therefore, is necessary to guard against the most erroneous values, but the department can only interfere in extreme cases, for it is unable to discover or question any but very extravagant departures from the average. The law has given it the power of calling for invoices or other proof, which is frequently done, and fines are often inflicted for

wilful or careless departures from the truth. The only real security, however, is in exciting an interest amongst those who have to declare the value. When once it is understood that these and other particulars are of real importance, there is, in importers generally, too much good feeling and desire to do what is right, to permit of other than the best information it is in their power to give being placed at the disposal of the authorities. There seems, however, no way of providing for the very numerous cases in which the consignee is ignorant of the value, or the agent who puts in the entry is without instructions to guide him."

So far as I can judge, the check on values in the case of exports must be even more difficult of application than it is in the case of imports.

We have thus two facts before us: first, a possibility of error in the original declarations as to quantity, which are found to vary from the actual quantities on a considerable average of articles as much as 1.50 per cent., and in extreme cases nearly 6 per cent., and which cannot be completely controlled by the officers compiling the statistics; and next, a farther possibility of error in the declarations of values, owing to the want of interest in the merchants or agents making them. I need hardly say here, that errors arising in this way are not likely to affect the returns as a whole as much as they may affect special articles; that in the absence of special motives for making wrong declarations in one direction, the errors made through indifference or carelessness by thousands of people are likely to compensate each other in so vast a field as that of the imports and exports; and that the comparison between two or three years coming together, in which there is no great change of system, might be fairly trustworthy as to the progress or retrogression shown, even allowing for a larger margin of error than it is necessary to allow for in the original data. But the more detailed the use which is made of the statistics, the more

necessary it is to keep in mind that there is a margin of error.

Another point has also to be considered. We may know pretty well where we are in comparing two or three years at the present time ; but the farther we go back the less is our knowledge as to the way the business was done formerly, and as to the increased or diminished accuracy of the data from that time. This last fact we know is especially important as to the imports, for there was a very considerable change of system in 1870, which Mr. Bourne fully describes in the paper already referred to. One of the principal changes was in the mode of ascertaining the values, which previously to that date, from 1854 downwards, had been computed according to a plan introduced by Mr. James Wilson, but which have since been declared by the merchants as already explained. We cannot be quite sure, I think, that the computed values before 1870 are on all fours with the declared values since ; the presumption would be that they are not. On this head I can most heartily re-echo the complaint made by Mr. Bourne in the paper already cited, that the old plan was not maintained in conjunction with the new for several years. His assertion that the change of system produced in many articles of import an apparently great divergence between the values of 1871 and former years, is a most serious one, and should warn us all to use a great deal of caution in carrying our comparisons of import values farther back than 1870.

Farther, whatever dependence may be placed on the returns of the total imports and exports of particular articles, and of the aggregate imports and exports, a fresh difficulty arises in making the data complete as regards particular countries traded with. Formerly it was a very general practice to consider imports as coming from the country they had last

left, although they might only have been in transit through that country; and exports as being despatched to the country they would first arrive at, although they might only be going there in transit. The attempt has been made in recent years to show the countries of ultimate origin and destination, but it is impossible to suppose that this attempt has been completely successful. Where there is a through bill of lading, merchants can easily declare the country of origin or destination as appearing in that document, but such documents themselves do not always disclose the exact facts on this head. I have again to refer to Mr. Bourne's statements in the paper already referred to, but I may add one or two obvious facts, which you can all test. It is beyond question that there is an appreciable amount of trade between this country and Switzerland. We import Swiss clocks and watches, and we send there cotton and other yarns to be made up, besides other articles. But Switzerland does not even figure as a separate country in our returns. Our trade therewith figures as part of the trade with France, Belgium, Holland, and perhaps Italy. Another of these facts is, that in recent years a great deal of the raw sugar we imported was of Austrian origin, but the bulk of it figured in our returns as an import from Germany. Apart then from the above question as to the data themselves, there is a special source of error in the accounts of the trade with particular countries. It must not be supposed that all the so-called trade with France, or Belgium, or Holland, or the United States, is really our trade with those countries. Large deductions or additions may have to be made in a thorough study of the subject.

I have spoken mainly of the import and export statistics of the United Kingdom, but *mutatis mutandis* the same remarks apply to the data of imports and exports in every

country. Governments which have a voluminous tariff are probably more careful about the imports than we are, verifying values and quantities in a way we do not attempt; such Governments are probably also very careful in verifying the quantities and values of articles exported on which there is a drawback; but they are none of them likely to be more careful than we are about exports where there is no drawback, and none, we believe, are in fact more careful, while their extra care as to imports is no doubt balanced in most cases, in countries like the United States for instance, by the ingenuity and resource of the smuggler. No foreign country, therefore, any more than England, has import and export statistics which can be used as absolutely accurate in the sense commonly assumed. The remarks already made as to the possibility of useful comparisons, the nearer the years compared are together, and the danger of not allowing for changes of system, also apply to foreign countries as well as our own. On this latter head it happens to be possible to give one or two good illustrations from the experience of foreign countries. My first illustration is from the experience of the United States. Mr. Wells, the special commissioner of revenue of the United States in 1867-69, in one of his well-known reports, that for 1869, after stating at one place that he assumes the sums chargeable to smuggling and undervaluation of imports to be counterbalanced by the undervaluation of exports, goes on to say in a footnote: "If we confine ourselves to the comparison of the values given to imports and exports respectively, in previous years, this may be considered a reasonable estimate; but for the last fiscal year it is certainly not the case. Under the present organisation of the bureau of statistics, the values given to the exports of the country have been scrutinised and verified to such an extent as to leave but little doubt that the state-

ment for last year is substantially accurate and complete. The fraudulent undervaluation of imports, however, it is not within the power of such an agency to prevent.”*

A statement like this discloses the existence of a very serious pitfall for us, when we carry our comparisons of United States trade farther back than 1869. It may throw some light perhaps on such questions as the excess of exports from the United States in recent years, which may after all be largely due to the insufficient record of the imports. As regards comparisons before 1869, it is immediately suggested that the apparently slow increase of United States trade between 1860 and 1870 may in part be apparent only, being due to the imperfection of records, and especially to a check on the record of imports through the introduction of the war tariff between the two dates.

The second illustration I shall give is from the last number of the foreign statistical abstract, in which it is noticed that the Austrian Statistical Bureau has lately begun to substitute real for official values, and tables are given showing side by side for four years these official and real values. The subject is of so much interest that I propose, for the sake of reference in our *Journal*, to extract the tables. They will be found in the Appendix (Table I). The following is a summary of the totals:—

[Values in £1,000 sterling—000's omitted.]

			IMPORTS.		EXPORTS.	
			Official Values.	Real Values.	Official Values.	Real Values.
			£	£	£	£
1875	..	..	55,255	54,927	50,447	55,086
'76	..	..	51,807	53,428	50,857	59,523
'77	..	..	54,666	55,526	55,060	66,660
'78	..	..	59,672	55,210	59,970	65,469

* Report of Mr. Wells for 1869, pp. xxix. to xxxi.

The discrepancies in the two values are perhaps not very serious in the case of the imports, except for the year 1878 but in the case of the exports, they are serious all through, the "real" being 5 millions to 11 millions more than the "official," and the proportion of the discrepancy being from 10 to 20 per cent. In the case of special articles, it will be observed, on referring to the tables, that the discrepancies are still more serious, and that the very first article on the list—animals (except horses)—is a good instance of extreme differences. In the imports of this article the "real" are in almost all cases about twice the "official" values, and in the exports they are about four times the "official" values.

I have a third illustration to give you, derived from French experience. In 1870 the French statistical authorities began to give the countries of origin and destination. It is impossible, therefore, in France to continue from the French accounts any real comparison of French trade with certain foreign countries from a period before 1870. The change of practice throws out all comparisons, and throws out especially any comparison of French trade with England, England being a country of transit to and from France.

The conclusion surely is that in regard to imports and exports, as with most other statistics, comparison with distant periods is not the easy matter it seems. The changes in the data from time to time interpose certain difficulties in the way of comparisons, which must be recognised and met. Besides these foreign instances, I have already given a recent illustration from the change in our own statistics so late as 1870, but the instances might be increased indefinitely. As regards our own statistics especially, the imports were affected by a change from official to computed values in 1854, already referred to, involving quite as serious consequences as those just mentioned in the case of Austria. At a still earlier date

also there was a change from official to declared values in the case of the exports, involving large discrepancies.

There is yet another question as regards these data which I must notice before passing on to the next point. The "values" so called when ascertained, whether official, computed, or declared, or in whatever way yet devised they are ascertained, are not identical with the values realised by merchants. They do not profess to be so when they are official or computed values, but even when they are declared by the merchants themselves, they are still different things from the values which the merchant realises. A merchant who declares a particular quantity and value at the time of import may be himself misled. A cargo of wool or grain when it comes to be delivered may turn out less or more than invoiced or estimated by a slight percentage, and the cargo when sold may realise less or more per lb. or cwt.; consequently may realise less or more in the aggregate than the value in the merchant's declaration. Errors in the estimate of quantities may possibly tend to compensate each other in accounts on a large scale, and such errors are also liable to check by the customs authorities, but the difference between the declared and realised values must remain and will not be so surely compensated. We must always consider, then, when we deal with these declared or other values, that they are not necessarily the same as the realised values but are only the best substitute we can obtain for them, and we must not use them as if they were accurate to a fraction. When an argument is used in which that accuracy must be assumed in order to make it of any value, we may be sure that the argument is bad, and the person who uses it does not know the necessary limitations of statistics.

A *second* cause of difficulty in the data—operating more especially when comparisons are made between the imports

and exports of different countries—is to be found in the difference of methods by which the data are obtained. I am referring now especially to the values. The nature of the difficulty has already been glanced at in reference to the changes of system in a particular country itself, but the systems used are still so various in different countries, that the fact requires to be incessantly remembered in any comparisons. The most important foreign countries have none of them adopted our practice of declaring values, which, as regards imports even here, is comparatively recent. In France the values of both imports and exports are computed according to tables of prices established by a commission of values; in Austria values are partly computed and partly official; in other countries there are still official values, modified in part as to imports, where there are *ad valorem* duties, by the declarations of the importers. There is the greatest variety of system. Not only then do the statistics of imports and exports in all countries vary from the values actually realised by the merchants, to which they ought to approximate, but they probably vary in different ways and degrees from the true standard, so that a comparison of the figures of two different countries ought to be made with great caution.* One fact alone will show what is meant. The tendency of our own method is at least to indicate very quickly any great change in the level of prices which may occur. The statistics being made from declarations of value,

* How great the difference is, any one who chooses may find out by comparing the exports from England to France, say, as they appear in the English official returns of exports, with the imports into France from England as they appear in the French official returns of imports. See also return of the trade between England and France, according to the official statistics of the respective countries (No. 405, Sess. 1881), in which other difficulties in the comparison of the returns of the two countries are pointed out.

checked by the daily use of price lists, changes in price act instantaneously, even in the returns as they are issued month by month. But it is not so in France. The monthly returns of quantities are there valued according to the last table established by the commission of values. They do not show quickly, therefore, any change in the level of price. In years when prices are falling they do not fall off as the English monthly returns do, and in years when prices are rising they do not increase so quickly. Again, in countries where official values are used, the variations will depend on quantities far more than on values, and the changes from year to year will consequently be different from those of a country which has declared or computed values. In comparing two countries together, or several countries with each other, or one country with all others or with a group, the differences arising from the original differences of data must be remembered. We must always beware of pushing any conclusions too far.

I need hardly say how much this conclusion strikes at a good deal of reasoning lately about the comparative growth of English foreign trade, and the foreign trade of other countries. A country with official values in a time of falling prices would show steady progress, where a country with declared values, as in the United Kingdom, would show a falling off, although in both countries the real movement might be much the same.

A *third* point to be considered, in using import and export statistics, is the periodical variations in price to which commodities are liable. As regards particular articles variations in price do not matter so much if quantities are also given. In showing the progress of wheat exports from the United States, for instance, it would be expedient to use the record of quantities and not of values. But when articles

come to be grouped, values must be used, as they must also be used in showing aggregate trade, and here variations in prices are most important. A low range of values in a particular year will make the aggregate smaller than it would otherwise be, and a high range of values would increase it; and clearly this cause of variation must be allowed for. How it is to be allowed for may be a difficult problem, but the difficulty cannot safely be ignored. When it is considered that the range of difference in the aggregate values of the exports of the United Kingdom, owing to difference of price only, amounted to 30 per cent. between 1873 and 1879, we can easily perceive that no comparison between the two years which omits to take note of the different levels of price, can be of any value. This consideration, by the way, disposes altogether of the fair trade argument, which assumes a decline of the English export trade between 1873 and 1879, corresponding to the decline of value only.

This difference of price may also be most material in comparing the relative progress of the foreign trade of two different countries. The articles of one country may be affected more by a change in the level of values than the articles of another. If the exports of cotton manufactures, for instance, constitute a larger part of the export trade of the United Kingdom than they do of the export trade of France, and the price of cotton manufactures has declined greatly, it would be reasonable, other things being equal, to look for a greater apparent reduction in English than in French exports, although perhaps, as the decline may have been mainly due to a decline in the price of the raw material contained in the exports, the falling off in the real exports of France, *i.e.*, the exports of what is strictly the production of the country, may be greater than the falling off in the real exports of England. In other words, not only is the com-

parison of the trade of the same country in different years not simple but difficult, owing to this question of price, but a comparison of the progress of two foreign countries may be still more complicated by the same cause of variation.

A *fourth* difficulty in using the statistics of imports and exports, so as to show normal progress or retrogression, arises from the disturbing influence of great economic events. A great war, for instance, between two countries, may destroy the foreign trade of one or the other, or both—stimulate certain parts of the foreign trades of third countries, necessitate large loans, which may in turn stimulate the foreign exports of the third countries trading, and in general act as a cause of great disturbance to the foreign trade of their neighbours as well as themselves. Such an event, again, as the gold discoveries of California and Australia, disturbs the normal course of trade by causing an immense migration and colonisation. The Lancashire cotton famine, itself one of the secondary consequences of the American civil war, disturbed the trade of the civilised world for probably fifteen years. It stimulated the growth of cotton in countries like India, Egypt, and Brazil; led to a great export of capital to those countries for their farther development; induced a great movement of the precious metals, which in turn stimulated trade in various ways; and finally, as the stimulant was withdrawn, and the cotton trade returned nearly to the old channels in which it ran before 1860, contributed to such incidents as the failure of Alexander Collie in 1875 and the City of Glasgow Bank in 1878, the rottenness disclosed by these failures having been largely due to the excessive investment of capital in the eastern trade in the times of the cotton famine. The abnormal swelling of trade at one time, in consequence of the disturbance of this great event, and its abnormal diminution at another time, when the stimulus is

withdrawn, have all to be allowed for of course in extracting the real lessons as to trade progress or the reverse from import and export statistics. The payment of the German indemnity in 1871-73 may be noted as another disturbing event, tending to swell for a time the export trade of France and the countries which lent to France. But it would be needless to enumerate all such causes. Suffice it to note that the history of the last forty years alone comprises the Irish famine, and the exodus to America which followed, the gold discoveries, the Crimean war, the Franco-Austrian war, the American civil war, the Lancashire cotton famine, the Austro-German war of 1866, the Franco-German war of 1871, the Franco-German indemnity, the introduction of gold and demonetisation of silver in Germany, the resumption of specie payments in gold in the United States, and last of all, an unusual run of bad seasons for agriculture in England between 1875 and 1879 inclusive. What a complicated business it must really be to extract from the records of imports and exports of the period any conclusion as to their normal progress, or as to the effect of differences in the economic *régime* of different countries in promoting their foreign trade or general welfare, especially when differences in the volume of imports and exports due to differences of price and changes in the mode of obtaining the returns may also have to be allowed for.

A *fifth* cause of difficulty in appreciating the figures of imports and exports, especially for comparative purposes, arises from the different character intrinsically of the foreign trade of different countries. Admitting that quantities and values are stated in precisely the same way, the figures do not mean the same thing to each country. There are at least two important differences possible, which I shall notice, viz., the differing degrees in which the trade may be one

of transit only, and the different amounts of the carrying trade of different countries, as to which there is no precise record of values, yet the outlay on which, by a shipping country, may be as much an "export" as the export of grain from a grain-growing country like the United States, which happens to be exactly recorded.

As regards the degrees in which the foreign trade of different countries may be one of transit only, I think the differences are really most signal. Some of these differences are on the surface. England has on the face of the account a large transit trade, the re-exports, as they are called, being a very large item. Belgium affords a still more striking illustration of a large transit trade. But there may be further differences of a vital character which are not on the surface. Any foreign articles once admitted into consumption in a country, and re-made up in any way, and sometimes with little or nothing done to them, are treated, when exported, as exports of native produce and manufactures. You will actually find tea, coffee, and raw cotton among the exports of domestic produce from France. The result is that the exports, so-called, of domestic produce and manufactures from a country which manufactures largely, are, in part, in the strictest sense of the word, re-exports. The raw material previously imported goes out in a different guise, but it is still the same raw material. To compare the exports of native produce of such a country, with those of a country which does not import raw material to be re-exported in a manufactured form, we ought clearly to deduct from the exports the value of the previously imported raw material which they contain. The explanation specially applies to a country like England, which is a manufacturing country more than any other, as compared with countries like the United States, which re-export in a manufactured form very

little of what they import. If a correction were made, probably it would appear that our exports of domestic produce, exclusive of our carrying trade, though nominally larger than those of any other country, are not really much larger than some, and are perhaps, in some cases, exceeded. The United States, for instance, exported in 1879-80 about 170 million pounds' worth of domestic produce and manufactures, hardly any raw material previously imported being included, for the manufactures altogether are only a few million pounds. The United Kingdom, on the other hand, exported nominally, in 1880, 223 million pounds; but from this sum a large deduction must be made for the value of the previously imported raw material contained in it, perhaps about 60 million pounds; deducting this, the real export of British produce would be only 163 million pounds, as compared with 170 million pounds from the United States. Our exports per head would still be larger than those of the latter country, and a special difference is made by the shipping, which again brings up our total, but the figures may serve to illustrate how different the real may be from the apparent facts. When the real magnitude of the export trade of different countries is compared so as to show their dependence on foreign countries for markets, the point of view here referred to is not to be lost sight of.

A similar rectification is also necessary as regards the imports, in any comparison at least of what is imported for final consumption with the exports of native produce. In some countries the whole imports, less the re-exports, may be treated as imports for final consumption; in the United Kingdom, to arrive at a comparable figure, we must deduct the value of the previously imported raw material contained in the manufactures exported, this raw material being merely the block to which British capital and labour are applied.

Applying these considerations to the case of England and other countries, we find that our imports for final consumption are still by far the largest, but the interval between us and other countries is considerably reduced. Our gross imports last year in round figures were 410 million pounds, but deducting

	£
For re-exports	65 mlns.
„ raw material previously imported, }	60 „
included in manufactures exported .. }	
	—
Total	125 „

we arrive at a sum of 285 million pounds only as the net imports for final consumption in the country. This is a very different figure, though large, from the gross total of 410 million pounds.* It shows that our dependency on foreign countries for supplies, or for a market for our own produce, is really much less than is sometimes supposed. We are no doubt dependent on them for the “blocks” with which we work in making for export, and this is an important fact by itself, while the fact of so much foreign produce going through our hands, though we do not ourselves consume it, has its value in the proper place; but our dependency in these respects is a different thing from our requiring foreign markets where we may sell what we produce, in order to buy what we finally consume. In this respect foreign countries are more nearly on an equality with us than is sometimes supposed.

* This last figure, it may be explained, is itself, strictly speaking, too small, not including the transshipment trade and bullion, which ought, I think, to be included, and which would bring the total up to 450 million pounds; the imports for final consumption being, however, as stated in the text, only about 285 million pounds.

Another important conclusion is to be drawn from this consideration. The exports of a manufacturing country may be nominally affected by a change in the value of the previously imported raw material, although there is no real change in the native produce exported, or when the real change may be the opposite of the nominal one. Say that a fourth of the exports consists of previously imported raw material, then a decline of 50 per cent. in the value of the raw material would produce a decline of $12\frac{1}{2}$ per cent. in the aggregate exports, which would be entirely nominal. If at such a time the exports were apparently stationary, the real fact would be that they had increased $12\frac{1}{2}$ per cent., or rather about 17 per cent., allowing that the increase really takes place on three-fourths only of the nominal total. The influence of changes of price has already been referred to generally, but the special influence of this factor on the exports of manufacturing countries appears also worthy of attention. It is by no means an immaterial point. The apparent falling off in the exports of British produce and manufactures between 1873 and 1879 is to be accounted for largely by a reduction merely in the price of the raw cotton—the block to which our industry was applied—contained in the manufactures.* To talk of the decline between 1873 and 1879 without taking note of such facts would clearly be to mistake show for substance. No wonder figures are so often said to be capable of proving anything, when pitfalls like these, which have seldom even been referred to in past discussions, are in the way.

With regard to shipping, the facts may be more simply stated. A country with a large carrying trade may export little in the shape of commodities, and yet be to all intents

* See Report on Prices of Imports and Exports, C-3079, Sess. 1881.

and purposes a considerable exporter. Its outlay in wages and provisions for ships' crews, in equipping and repairing ships, in insurance and renewals, and the profits it earns, are all parts of its export as much as if the export were embodied and stored up in a commodity. In any complete account of the foreign trade, therefore, the carrying done by carrying countries, with analogous charges, ought to be included; otherwise no proper comparison is possible with countries which have a small shipowning business. The so-called foreign trade in the one case is the whole foreign trade, in the other it is only part of the whole.

I shall have to make use of this principle afterwards in dealing with the question of the balance of trade; but it is enough to state it, I hope, to prove its reasonableness. To put the point in a concrete shape, the import and export statistics of a shipowning country like England do not show its foreign trade, as the imports and exports show the foreign trade of the United States, which has only a very small shipowning business.

That all these questions are substantial and not formal, may be shown by a single example of how much our view of the foreign trade of the United States as compared with that of England would be altered by taking account of them. See, it is said, how much of American goods the United Kingdom imports, and how little of British goods America imports. This difference, I confess, would not, in my opinion, be at all material if the real facts were the same as the apparent ones. Trade is well known to be very often triangular; we may buy from America, and send goods elsewhere on American account, though not directly to America. But the statement is itself untrue if we examine the facts carefully. No doubt we record an import of 107 million pounds from the United States, and only record a return of

38 million pounds, showing an excess of imports over our exports amounting to 69 million pounds, which it is supposed the Americans prevent us by their tariff from sending to them. But people forget first that our trade is largely one of transit both directly and indirectly through our manufactures. Among the articles we import from the United States there was £31,784,000 worth of raw cotton alone in 1880, of which directly as a re-export, and indirectly through our manufactures, we would send away at least four-fifths or 26 million pounds. Why should we expect the United States to take goods directly from us for this amount? Surely the countries which ultimately get the raw cotton directly or indirectly are the countries which should pay, and they may do so in part directly as well as through our agency, our only share being a commission on the whole transaction. The second fact is that we export to America in the form of carrying goods on American account, and this item probably amounts at the present time to 16 million pounds a year. These two sums together—what we send away elsewhere of raw cotton alone among articles we have imported from America, and what we export to America in the shape of doing carrying work for her—go a long way towards extinguishing the apparent balance against us on the import and export account. They amount together to 42 million pounds, thus reducing the apparent balance from 69 million pounds to 27 million pounds. This is a much smaller sum than might at first be expected from the bare record of so-called imports and exports, and shows how short a way the latter figures carry us by themselves. As already stated, it is of no consequence whether there is an exact balance or not, but the actual facts should be well understood, and they cannot be understood without appreciating the totally different character of the foreign trade of the two countries.

The above, let me add, are not the only points of difficulty in the study and use of import and export statistics which ought to be considered. I have not attempted to make an exhaustive catalogue. I have simply noticed a few points which have lately been brought under my notice as material or which recent controversies have suggested. They are enough to show, however, that there is no royal road to this branch of learning any more than to other branches. There is a great deal in the study, and patience and labour are required of all who would enter into the field. That there are yet more difficulties will be apparent when we come to the special applications of these statistics which I have thought it would be useful to investigate, viz., their bearing on the question of the balance of trade or balance of indebtedness between countries, and their bearing on the points in dispute in the fair-trade controversy. We can show not only by a statement of principles, but by the actual steps necessary in applying the statistics, how much consideration is required in the application of figures which appear very simple, and how difficult it is to arrive at correct views. To prevent misunderstanding let me only add that, while pointing out the difficulties of the study, I am saying nothing to imply any doubt of conclusions which are arrived at after a sufficient study of all the facts. There are conclusions in all studies which it is hard for the unlearned to follow, but they are none the less certain to those who care to learn.

III.—BALANCE OF TRADE AND BALANCE OF INDEBTEDNESS. THE GENERALITY OF THE EXCESS OF IMPORTS.

THE first special question I propose to discuss is the application of the import and export statistics to the problem of the balance of trade, and the connected problem of the balance of indebtedness of a country ; the case I propose more particularly to investigate being that of the United Kingdom. Importance has come to be attached to the question in this way. The imports into the United Kingdom, as recorded, have in late years shown a great excess over the exports from the United Kingdom, as recorded. By many this excess is treated as a trade balance against this country, and without much ado there is also an assumption that the country is running into debt. We are buying, it is thought, more than we can pay for, and we can only pay by an export of securities. The conclusion itself seems so extravagant to any one who watches the constant issues of foreign securities on the London Stock Exchange, or the constant lending by private capitalists to foreign countries, which hardly ever ceases, that for one I have never thought it worth while to discuss it. A statement was actually brought me on one occasion showing that the country had become indebted to foreigners in twenty years to the extent of 1000 million pounds, which had never been paid, and which was all represented by bills, the non-payment of which would bring about, some day, a financial collapse. The writer was plainly unaware that the whole amount of bills current at one time in the country, in both home and foreign trade, was under 1000 million pounds, that the amount has not been increasing lately, and that the foreign bills are only about a third or fourth part;

and I think also he was unaware that in the foreign trade it is English capitalists who give credit to foreign nations, and not foreign capitalists who give credit to England. Still the statements as to the excess of imports have acquired a certain amount of currency, and we may see how far they are really countenanced by import and export statistics.

The general statement of the difficulties of the inquiry already made has somewhat cleared the ground. We are prepared to see at the very threshold that the imports and exports themselves are not exact to a fraction. There may be an error in the data of 1 or 2 per cent., and the values may also differ from the values realised by merchants. Suppose there is a difference of 2 per cent. only, and that it acts on imports and exports in opposite directions, increasing the former and diminishing the latter, we have a difference at once of about 15 million pounds in the so-called excess of imports. Our imports, bullion and transhipment included, amount to nearly 450 million pounds; our exports, bullion and transhipment also included, to over 300 million pounds, on all of which 2 per cent. comes to the sum of 15 million pounds, as stated. The balance of probabilities is perhaps against any variation of such great magnitude from the amounts actually realised by merchants, while the variation may be in the opposite direction, tending to swell the excess of imports; but the great effect of what is really a slight percentage should warn us against reasoning too finely. Even the apparent amount by which the recorded imports exceed the recorded exports may be subject to great reduction.

The variations in the level of prices from year to year are also most material in such a question. A sudden rise or fall of 5 per cent. in the average price of the exports beyond the corresponding rise or fall in the average price of the imports,

would alter momentarily the excess of imports to a most material extent, without implying any real changes in the general conditions of our trade. Similarly, any of the great disturbing economic events referred to, two of which have at least affected business during the last few years, viz., the resumption of specie payments in America, and the bad harvests in western Europe, might largely alter for a moment the balance of trade. Last, and more important, the fact of our being a ship-owning country, and doing other duties in connection with the foreign trade of the world, causes what is really a large export of the produce of our capital and labour in an unrecorded form, and there can be no commencement even of a discussion of the facts without a proper allowance for this export; while the trade balance itself, when properly ascertained, is no more than one item in the general account of international transactions, especially when the country concerned is a country like the United Kingdom, having investments abroad in endless number and variety. We see at once from these considerations that even to ascertain the exact excess of apparent imports over apparent exports is no easy matter; that this excess is different from the real excess in the case of a country like the United Kingdom, which has a large ship-owning business; and that the excess when ascertained is only one item in an international account. We are far enough already from the rough-and-ready handling which the excess of imports receives from writers in the 'Quarterly Review' and the like authorities.

Grappling now with the subject more directly, what I have first to suggest, in accordance with a sound maxim of statistical investigation, is an inquiry how far the excess of imports is a new or not a general fact. There is little use in discussing it at all until we look about us. The question

of the generality of the fact is very soon settled. An excess of imports is a very common thing indeed. I have only to refer you to the Appendix No. II on the point. In this I have had taken out for a late year in each case, usually 1878 or 1879, the imports and exports of every country in the world: there is hardly an exception, I think. The result is that in forty-five instances there is an excess of imports, and in forty-two instances an excess of exports. I say nothing at present of amounts in each case: it is possible that the United Kingdom is specially unfortunate on account of the magnitude of the case. It is clear, however, that the mere fact of excess of imports is a very general one in the experience of nations. We do not stand alone.

Another general fact which appears is that, taken altogether, the column of imports is in excess of the column of exports. The totals are:—

						£
Imports	..	..	..	..	..	1,768 mlns.
Exports	..	..	..	..	..	1,606 „
Excess of Imports	..					<u>162</u> „

This fact is surely very significant. It is the same goods substantially which are dealt with in both cases, the fact that it is not the same year which is dealt with in all cases making no sensible difference when so many countries are dealt with and the years are selected without any bias. But although it is the same goods that are dealt with, they are represented in the one column as 162 million pounds more than in the other column. This of itself suggests, I think, a natural reason for an excess of imports. A difference like this can only be due to a common cause, and that cause obviously is the cost of conveyance; the imports, being mostly or often valued at the place of arrival, include the

cost of conveyance; the exports, being valued at the place of departure, do not include that cost. Hence the difference between the two columns. In so general an account, putting all the countries of the world together, I can suggest no other cause of difference. Of course, after what I have already said, you will not expect me to put forward the figure as absolutely exact. We know too little of the methods followed in more than eighty countries to be sure that the values are comparable one with another. Still the resulting difference, being in accordance with reasonable expectation, is evidently to be relied upon as a fact, though we cannot state a figure which pretends to any exactness.

It follows also that, as there is and must be an excess of imports in the aggregate, some particular countries are entitled to the excess. These must also be the carrying countries. Freight must be the chief matter; but the difference cannot be wholly freight, as the figures include goods which have passed from country to country by land, though not a large amount in proportion, as well as goods which have passed by sea. There are also other charges on the conveyance of goods besides the freight paid to ship-owners, and all must be included in the difference here stated, or the true figure which it approximately represents. Still, whoever carries, in proportion to what he does carry, or rather in proportion to the outlay he contributes for the carrying and the profit he thereby earns, must be entitled to a corresponding amount of imports. If the account were exact, and there were no other cause for an excess of imports or exports in particular cases, the table would show not only what the excess of imports was in the aggregate, but what were the carrying nations and how much each received. The table, however, does not show this. No doubt the countries with an excess of imports are largely carrying nations: the

United Kingdom, Norway, Denmark, Germany, Holland, France, Italy; but there are other countries with an excess of imports, while in some cases, perhaps, the excess is not so large as that to which the share of the country concerned in the carrying trade would apparently entitle it. This suggests obviously that besides the cause which produces an excess of imports in the aggregate, the excess varies in the case of particular countries, or becomes even an excess of exports, owing to another cause. That cause I have to suggest is that countries are either borrowing or lending in their international transactions, or that some are receiving while others are paying interest. The result is that if we add the excesses of imports on the one side and put against them the excesses of the exports on the other, the aggregate excesses of imports are found to be 286 millions, and the aggregate excesses of exports 124 millions, the difference being the net excess of imports already stated. The excesses of exports in certain cases amounting to 124 millions, would also imply that in the international transactions of the world, unless the figure should be modified by including the bullion, as we ought to do for this purpose, but which I have found it impossible to do in all cases, a sum of that amount was passed as the balance of the various loan and interest transactions of the world. The total amounts lent and the total amounts paid for interest may both have been larger, and there is nothing to indicate the amounts; but of the fact of a balance having to be passed, there can be no question. While we conclude then, from the general fact of an excess of imports, that it corresponds to the cost of conveyance in international trade, it is quite possible that the countries entitled to share in it may show a smaller excess than they would otherwise do through their lending to foreign countries, or may show a larger excess through their receiving interest or borrowing on

balance; while, on the contrary, non-carrying nations may show a small excess of exports, or even an excess of imports, in consequence of the balance of their other transactions. The figures in the case of each country are no guide to the state of its general account with other nations.

It is to be observed, however, that there is a geographical distribution to some extent of the countries having an excess of imports or of exports respectively. The nations in the tables are classified geographically, with a cross division for the British empire and for the rest of the world; and the result is, that while Europe shows an enormous excess of imports, viz. :—

			£
United Kingdom and Malta	..	..	112 mlns.
Other countries of Europe	..	..	142 „
Total..	..	..	254 „

the other quarters of the world show on the whole an excess of exports, viz. :—

				Excess of	
				Imports.	Exports.
				Mlns. £	Mlns. £
<i>Africa—</i>					
British empire	..	..	..	4	—
Other countries	..	..	..	—	4
<i>Asia—</i>					
British empire	..	..	..	—	19
Other countries	..	..	..	—	2
<i>Australasia—</i>					
British empire	..	..	..	6	—
Other countries	..	..	..	—	—
<i>America and West Indies—</i>					
British empire	..	..	..	1	—
Other countries	..	..	..	—	78
Deduct				11	103
				—	11
Excess of exports ..				—	92

The figures at least suggest, I think, that it is the old countries—the homes of capital—which have to receive interest, and the new countries—principally the United States—which have to pay it. Certainly no inference can be drawn to the effect that it is the countries with an excess of exports which are the most prosperous, the list comprising Peru and other South American States, which have lately been passing through the most serious calamities. The most singular fact disclosed by the table is perhaps the excess of imports in the case of the Australian colonies; but this is partly to be accounted for, I believe, by the fact of the continuous lending of this country to Australasia, which has been going on for many years past. Its natural place would have been with America and the new countries generally. The facts as to the Cape Colony give rise to a similar remark.

I shall have to return to the figures shortly in reference to the question of the charges for conveyance to which the United Kingdom is entitled; but I pass on to remark that as the fact of an excess of imports is general, it is also by no means new, either in the case of the United Kingdom or of the world generally. With regard to the United Kingdom, the fact is tolerably well known; but to make this paper complete, I have included in the Appendix (Table III) a statement of what the excess has been since 1854. The following is a summary of this table in three years' periods:—

*Excess of Imports, and Proportion to Total Imports and Exports,
including Bullion and Specie, 1854-80.*

[In millions of pounds.]

				Total Imports and Exports.*	Excess of Imports.	
					Amount.*	Per Cent. of Imports and Exports.
				£	£	
1854-56	..	..	..	330	37	11'2
'57-59	..	..	..	386	31	8'0
'60-62	..	..	..	432	53	12'3
'63-65	..	..	..	523	60	11'5
'66-68	..	..	..	566	67	11'8
'69-71	..	..	..	617	61	10'0
'72-74	..	..	..	732	61	8'3
'75-77	..	..	..	713	121	17'0
'78-80	..	..	..	690	119	17'2

* Averages of three years.

Thus we have always had an excess of imports into this country. Of late years it has been larger in amount and in proportion to the imports and exports recorded than formerly, but the only novelty to be inquired into is clearly the increase of the excess: (1) whether it is apparent or real—a most important inquiry, as the mode of valuing the imports, we have seen, was changed in 1870, and in 1871 there is a sudden and remarkable increase in the imports, and a still more remarkable increase in the re-exports; and (2) whether there are any circumstances to account for a real increase of the excess of imports, such as an unusual diminution of our current lending to foreign countries, or an unusual increase of ship-owning business making our unrecorded exports unusually large. At present I do no more than suggest these answers, the main point to be considered being that the excess of imports, and that on a very large scale in proportion to our whole foreign trade, is itself no novelty.

The excess of imports, as I have stated, is also no novelty in the aggregate trade of the world. On this head I have to quote the figures given by Dr. Von Neumann-Spallart,* to whom I am indebted for some of the figures in the second table of the Appendix, viz. :—

Imports and Exports of the World.

[In millions sterling, converting the mark at 20 per £.]

	Imports.	Exports.	Excess of Imports.
	£	£	£
1867-68	1,165	1,045	120
'69-70	1,266	1,100	166
'72-73	1,554	1,334	220
'74-75	1,450	1,289	161
'76..	1,493	1,296	197
'78..	1,508	1,359	149
'79..	1,571	1,355	216

Thus an excess of imports in the aggregate trade of the world is a permanent fact. There is nothing new in it. There is also some proportion between the aggregate trade and the excess of imports. The more trade there is the more charges for conveyance, though the progression is of course not quite constant, and the figures themselves are of course somewhat incomplete, which makes it difficult to exhibit a regular progress from year to year.†

* Uebersichten der Weltwirthschaft, von Dr. F. X. von Neumann-Spallart. Jahrgang 1880. Stuttgart. Verlag von Julius Maier. 1881. (See p. 360.)

† It will be observed that the annual amounts here are in no case so large as the annual amount in Table II of the Appendix. Some of the figures in the latter table, however, are for a year later than 1879, and the figures I have used also include the bullion and specie as much as possible, which are not included, apparently, in Dr. Spallart's figures.

*IV.—SUBJECT CONTINUED: HOW THE EXCESS
OF IMPORTS INTO THE UNITED KINGDOM IS
TO BE ACCOUNTED FOR.*

HAVING thus brought out the facts of the generality and want of novelty in the excess of imports, and having suggested as a necessary cause of it the cost of conveyance between countries which must always exist, and as a contributing cause the settlements of international accounts through the remittance of loans or interest on money previously borrowed, I propose now to inquire more particularly with reference to the United Kingdom how the excess is to be accounted for.

How much, to begin with, is annually due to us as a ship-owning and carrying nation? As we have seen, there is no reason why the actual excess of imports, in the case of a ship-owning nation, should correspond to the sum it earns in the carrying trade; the actual excess may be less or more than that sum; but the sum is nevertheless an item in the account just as much as the so-called exports on the one side or the imports on the other. I have to call attention to the words ship-owning and carrying. According to the definition already given, the question is, what is the amount of our contribution to the carrying of the world's goods? and though it is mainly a ship-owner's question, it is not wholly so.*

* The following propositions appear to cover the various cases of an excess of imports or exports arising in connection with carrying operations:—

1. A non-carrying nation, in the absence of borrowing or lending, ought to show in its accounts an equality between imports at the place of arrival, and exports at the place of departure.

2. A nation carrying half its foreign trade ought to have an excess

Replying to this question, I propose to take the facts as to ship-owning first, and to use first in a general view of the subject the excess of imports already shown in the aggregate trade of the world. Assuming this excess of 162 million pounds to represent approximately the cost of conveyance, how much of it should fall to the share of the United Kingdom? I have to suggest first of all, for reasons to be given afterwards, that about 32 million pounds of the amount, or rather less than 2 per cent. on the aggregate trade, represent miscellaneous charges and commissions, which all form part of the cost of conveyance, and of which the English share may be put at one-half, or 16 million pounds. Deducting this 32 million pounds, the sum of 130 million pounds is left as the amount due for freight. How much should fall to the share of England? It would also be natural in reply to compare the mercantile tonnage of England with the tonnage of the rest of the world, and divide the 130 million pounds between them in proportion. For all practical purposes England's proportion may be put at something like 55 per cent,* and assuming this proportion, the division would be as follows:—

of imports equal to the cost of carrying the goods one way; and so in proportion for whatever its contribution to carrying may be.

3. A nation carrying its whole foreign trade will have an excess of imports equal to the cost of carrying the goods both ways.

4. A nation carrying for others is entitled, in addition, to an excess of imports equal to the freight earned, less any expenses incurred abroad. Any nation contributing to carriage will also have something to receive.

* This is a rough deduction from the tables in the return, "Progress of British Merchant Shipping," No. 125, Sess. 1881. The calculation (for 1879) in millions of tons is:—

	Per Cent.	Proportion.
		Mlrs. £
United Kingdom	55	71½
Other countries	45	58½
Total	—	130

The sum of 71 millions sterling is certainly enormous. Still, the figures, whatever they may be worth, are not cooked in any way. I have simply taken the excess of imports as I have found it, and made a proper deduction as I think, so as to leave only what is due to freight, and I have then merely divided this freight between England and other countries in proportion to their tonnage. As regards the actual amount of this freight, it cannot be called extravagant. On the total imports of the world, as shown in Table II of the

	Sailing.	Steam.		Total.	Per Cent. of Total.
		Amount.	Equivalent in Sailing tons.		
<i>Tonnage of—</i>					
United Kingdom ..	4·0	2·5	10·0	14·0	50
Rest of British empire	2·0	0·2	0·8	2·8	9
Foreign countries ..	6·0	2·7	10·8	16·8	59
	7·2	1·1	4·4	11·6	41
Total	13·2	3·8	15·2	28·4	100

Thus the proportion of ships belonging to the United Kingdom alone is 50 per cent., and allowing a certain proportion of colonial ships to be owned in the United Kingdom, the figure of 55 per cent. in the text seems near the mark. Since 1879 our proportion has largely increased.

Appendix, it amounts to a charge of $7\frac{1}{2}$ per cent. only, and on the total tonnage of the world, sailing and steam together, it would show a gross earning of no more than £8 per ton.

As regards the division between England and other countries, it would perhaps be necessary to make a correction for the amount of outlay by English ships in foreign ports, in excess of the outlay by foreign ships in English ports; but the outlay of this sort, I believe, from a consideration of the other outlays in earning freight, cannot exceed about a sixth part of the total earnings. Deducting a sixth from the above sum of $71\frac{1}{2}$ millions, would leave about 60 millions as the sum due to the United Kingdom for freight. This would be our share of the 130 millions.

Adding together the 60 millions for freight and the 16 millions for miscellaneous charges and commissions, we arrive at a total of 76 millions, as the share of the above 162 millions, for cost of international conveyance annually due to the United Kingdom at the present time.

These figures are, of course, too uncertain to be relied upon by themselves, but they are not without corroboration. I have first to refer to various authorities who have dealt especially with the amounts of freight earned in the direct trade of the United Kingdom. Mr. Bourne, in a paper read before the Society, and printed No. 3 of the volume already referred to, was one of the first to grapple with the problem. His method, I believe, was incomplete, but some of his statements were most interesting. One of them (p. 63) is to the effect that 11 per cent. on the value of our imports would be a fair average allowance for freight. The imports are now, roughly speaking, over 400 millions a year, on which 11 per cent. would be 44 millions, and of this 44 millions the English share, dividing the sum in the proportion of the entries of English and foreign ships—70 per

cent. to 30 per cent.—would be very nearly 31 millions. Similarly Mr. Bourne gives the freight on exports as 20s. per ton for sailing vessels, and 30s. per ton for steamers, at which rates in 1880, the clearances of British sailing vessels being 3,182,000 tons, and of steamers 15,685,000 tons, the freight on exports in British bottoms would be nearly 27 millions. The total for imports and exports is 58 millions. Adding a sum for freights earned by British ships in the indirect trade, which must be enormous, and again making a deduction for outlays in foreign ports, we should still, on this showing, get well on to the figure of 60 millions, if not beyond it.

I must, of course, allow that Mr. Bourne was writing several years ago, and freights are a variable item; but I do not believe that one year with another they have fallen permanently below the level of price he quoted. Some freights have fallen, but not the run of freights to any material extent. There has been, in truth, no large margin for a fall in freights, the cost of working being itself from 70 to 90 per cent. of the income, and the absolute outlay per ton, though it tends to diminish with the increasing size of vessels, not having diminished very greatly from the time Mr. Bourne wrote.

Mr. Newmarch again, in a paper read to this Society in 1878,* proposes to deduct 5 per cent. from the imports and add 10 per cent. to the exports for all charges of conveyance. These amounts on our present trade would come to about 50 millions. Mr. Newmarch does not indicate what he thinks the other charges as distinguished from freight would be, and does not enter into the question of outlays in foreign ports or of work done by British vessels for foreign countries. The

* *Statistical Society's Journal*, vol. xli, pp. 218-20.

sum of 50 millions which he actually arrives at for the direct trade of the United Kingdom alone, appears to corroborate the notion that the sum of 60 millions for the whole earnings of our mercantile fleet, less all outlays abroad, is not wide of the mark.

In the same paper Mr. Newmarch quotes a letter of Mr. McKay, of Liverpool, who estimates the freights earned in British bottoms at 30s. per ton for imports and 20s. per ton for exports.* These rates on the tonnage of 1880, converting the net register ton into gross tons in the proportion of two-thirds to 1, would give:—

						£
Imports..	..	..	..	..	..	37 mlns.
Exports..	..	..	..	..	..	27 "
						<u>64</u> "
Total..	..					<u>64</u> "

Again, there is no mention of any outlays abroad, but the figures amply support those already stated. The sum these authorities deal with, it must always be remembered, is for the direct trade of the United Kingdom alone; and the figure of 60 millions already given represents our whole earnings from freight, less actual outlays abroad in earning it.

Quite lately I have obtained a calculation from a ship-owning friend (whom I shall call A, as I have many other facts from ship-owners, whose names I am not at liberty to mention, and to whom I shall assign the letters of the alphabet), with reference to average freights at the present time. His calculation is that on the weights of goods actually imported and exported in the American trade, freights come to about 27s. 6d. and 20s. respectively. It is not quite clear what these weights are, or whether they would be represented by the tonnages entered and cleared; but assuming the latter to

* I am unable to identify the tonnage actually quoted by Mr. McKay.

be the case, and converting the net registered tons into gross tons, as is done above, and assuming also that the American trade is a good average of the whole foreign trade, as I believe we may do, we get the following figures :—

						£
Imports..	..	..	..	..	..	34 mlns.
Exports ..	..	..	..	..	..	27 „
						<hr/>
Total..	..					61 „
						<hr/>

This is substantially the same figure as that arrived at on Mr. McKay's calculation.* It manifestly supports the conclusion that 60 millions at least is earned by our shipping, after deducting all outlays abroad, in the direct and indirect trades.

I propose now, however, to deal more directly with the matter. The tonnage of the British mercantile fleet being known, how much per ton, according to direct evidence, does the sailing ship and the steamer earn on the average, and how much ought to be the deduction for outlay abroad? I have many figures on this head to submit to you, and I must crave your patience on account of the very great importance of the subject.

I have first to call your attention to Appendix No. IV, in which there are certain tables extracted from the 'Statist' newspaper of 26th November last [1881]. These tables summarise the accounts of our principal joint-stock shipping companies in a form which was partly of my own suggestion, with a

* It is hardly worth while cumbering the paper with the details, but I have made a calculation of the actual weights of goods imported and exported, and these charges for freights would bring out a sum on such weights of 50 million pounds. I have also to call attention, on this head, to Appendix X, showing the amount of weights carried in our direct foreign trade, as far as weights can be stated.

view to the present paper, though the tables themselves are not my own work, but the work of a gentleman already well known to many of you, Mr. Wynnard Hooper, whose analysis, I think, does him great credit. The points in this statement to which I desire to call attention are these:—

a. The capital value of the fleets of eight companies, including some of the largest and best, but also including one or two of a second class, comes out on the average at £16 13s. per ton gross, which is not less than about £25 per ton net, taking the net as two-thirds of the gross, and the real proportion being less. The range of value is from £13 2s. to £18 12s. per ton gross, or from £19 13s. to £27 16s. per net registered ton. These are much lower values in all cases, I believe, than the ships could be built for. They are not extreme values.

b. The gross income of six of the above companies, representing fairly well the average of the nine, works out at £14 12s. per ton gross, or about £22 per net registered ton. This is a percentage on the value of about 88 per cent. The percentage on the value in each case is:—

						Per Cent.
Peninsular and Oriental	..	..	..	..	..	91
Pacific Steam	..	..	..	..	..	92
Royal Mail	..	..	..	..	..	70
Cunard	..	..	..	..	..	100
General Steam	..	..	..	..	..	84
Mercantile Steamship	..	..	..	..	..	59

Thus the lowest value per net registered ton is about £20 and the lowest proportion of gross earnings about 60 per cent.

c. The proportion of expenditure to gross income works out as follows:—

	Per Cent.		Per Cent.
Peninsular and Oriental ..	92·4	Cunard	83·9
Pacific Steam	92·6	General Steam	91·1
Royal Mail	99·3	Mercantile Steamship ..	87·7

The average of the six is about 91 per cent., and the lowest is about 84 per cent. As the gross earnings are a large percentage of the value, so the gross outlay is also a large percentage of the gross earnings.

The outlay per ton gross amounts to £13 7s. on the average of the six companies, equal to about £20 per net registered ton. The value being £25, this shows an average outlay in proportion to the value of 80 per cent.

d. In the case of three of the principal companies practically little more than half the gross earnings are from freights, but they earn from freights alone £2,116,000, or about £8 per gross ton, equal to about £12 per net registered ton. In any case a part of their income from passengers, probably the larger part, being for the conveyance of foreigners, or of persons travelling on foreign account, has the same effect on the international account as a charge for conveyance of goods. It is a debit to foreign nations, and a credit to the ship-owner in this country.

e. The average expenditure per ton is stated under several heads for each of the three principal companies, and is in all very nearly alike, the mean being as follows:—

	Per Ton Gross.		Per Ton Register.	
	£	s.	£	s.
Coal	2	12	3	18
Pay of Crews	1	10	2	5
Provisions	1	8	2	2
Repairs and Renewals ..	1	12	2	8
Insurance and depreciation ..	2	2	3	3
Other expenses	4	8	6	12
	13	12	20	8

I postpone drawing any deductions from the figures, as I have other figures to give, but I may note in passing that the figures as to the eight companies comprise 442,000 tons gross of shipping; the figures as to six, 400,000 tons; and the figures as to three, 278,000 tons. A considerable part of the steam mercantile fleet is thus represented.

I have next to direct attention to the series of statements respecting different classes of ships in Appendix No. V. The statement B is exactly parallel, it will be observed, to the statements above quoted, relating to the leading companies which publish their accounts, with the differences that only the outlay is stated, and that the outlay abroad is distinguished from the outlay at home. The general result is that on a somewhat higher valuation, the steamers being valued at £20 per ton gross, or £31 per ton net register, the outlay is also about 65 to 70 per cent. of the value, or £21·88 per registered ton in the one case and £20·34 in the other case. The amount spent per ton on wages, coal, and other items is less than in the case of the companies which publish their accounts, but the total outlay is swollen by a large charge for depreciation.

With regard to the distribution of the expenses between this country and abroad, the point to note seems to be that the total abroad in the one case is £7·70 per ton and in the other £7·60 per ton, or about 35 per cent. of the total outlay. The amount is chiefly for port expenses and Suez Canal expenses.

The next statement, C, also relates to a steamer, but of a different class from the above, the value being £19 only per net registered ton, and the gross outlay £14 3s. per ton. The wages are again much lower than in the case of the first-class steamers, but the outlay for coal is as much as £5 per ton.

The next statement, D, is also a steamer—a cargo boat—

the actual value not being stated, but apparently belonging to a class which is valued at £25 per ton. Here the outlay is £14 13s. 7d. per ton, and the wages are as much as £2 17s. 6d. per ton.

E. Is another steamer, a plain cargo boat, valued at £20 per ton, with an annual outlay of £11 2s. per ton, including only £1 10s. per ton for wages.

F. Is another cargo boat, value about £22 per ton. Here the gross earnings are stated, and amount to about £17 per ton, nearly 80 per cent. of the value. Of the £17 per ton earned, the outlay abroad is £7 per ton, or between a half and a third.

G. Contains an account of four steamers in the Mediterranean trade valued at £15 per gross ton, or £22 net, whose average outlay amounts to about £10 16s. per ton gross, equal to about £16 per ton net. The results are in fact much the same as for F, though the payments abroad do not appear so large.

H. Is a record of four steamers engaged in the coasting trade or short voyages. Their average value is also about £15 per gross ton, or £22 per ton net, and the average outlay is about £10 10s. per gross ton, or £15 15s. per net ton.

The next records, I, K, and L, all relate to sailing ships : I shows an outlay of £5 17s. per net registered ton ; K an outlay of £6 1s. 8d. ; and L, which gives an average of no fewer than fifty vessels engaged in miscellaneous trades, an average outlay of about £5 6s. per net registered ton. The values in I and K are £15 and £14 respectively, and in L about £9 10s. per ton. In the case of L the statement is accompanied by a private note, indicating that the profit is about £1 16s. per ton, that is, about one-third of the outlay. This would make the gross earnings over £7 per ton ; and as

the outlay abroad is £1 10s. per ton, the gross earnings receivable at home would be about £5 10s. per ton.

Combining all the information from the various sources, what it seems to point to in the case of steamers is first a gross outlay, ranging from about £11 or £12 up to £20 and even more per net registered ton, this gross outlay being also about 80 or 90 per cent. of the income, which would thus range from about £15 to £22 per ton. In no case, apparently, not even that of the lowest collier, can the gross income be put at less than about £15 per ton. The subjoined table brings out this clearly :—

	Gross Income where Stated, per Ton.	Outlay per Ton.	
		Amount.	Per Cent. of Income.
	£	£ s. d.	
Six Steamers in 'Statist'	22	20 - -	88
Statement B	—	21 - -	—
" C	—	14 3 -	—
" D	—	14 13 7	—
" E	—	11 2 -	—
" F	17	12 - -	7c
" G	—	16 - -	—
" H	—	15 15 -	—

Thus, in any case where the income is mentioned at all, even in the case of an ordinary steamer spending no more than £12 per ton, there is no lower sum mentioned than £17 per ton. Assuming that in all the other cases the percentage of expenses is also high, and not less than 80 per cent. of the income, we should have an income in all, except the lowest class, amounting to about £16 to £18 per ton and upwards.

I shall propose then to place the earnings of our steam fleet on home account, inclusive of the earnings from

passengers, at not less than £15 per ton, which would allow for expenditure in foreign ports. This on the tonnage registered at the end of 1880, viz., 2,723,000 tons, would come to about 41 million pounds *per annum*.

With regard to the sailing vessels, the problem seems more simple. The average annual earnings may be put at £7 per ton, the outlay being £5 6s. per ton. The sum of £7 per ton on a fleet of 3,851,000 tons comes to about 27 million pounds, from which about £1 10s. per ton, or say 6 million pounds, would fall to be deducted for outlay in foreign ports, leaving about 21 million pounds as earned on home account.

The two sums add up to 62 million pounds, which is not far from the sum of 60 million pounds already arrived at. A certain deduction would of course have to be made from this calculation for the earnings of the fleet engaged purely in coasting, but not sufficient, I think, to alter the round figure of 60 million pounds.

As a rough calculation, I would suggest that £5 per ton from sailing ships, and £15 per ton from steamers, will give us an approximate figure for the foreign earnings of our mercantile fleet, making all corrections for outlays abroad. If there is any over-estimate, there would be a set off to some extent in the outlay on foreign vessels in our own ports.

My own impression is that the figure is under and not over the mark. The above account deals only with vessels on the register of the United Kingdom, and known to be employed in the foreign trade. There are many vessels, as already hinted, on colonial registers, or which have been lost sight of, which are really British owned, and which bring an income to British owners. We may be sure that there are considerable sums beyond what has been stated to be brought to account.

It will serve to make clear to us what all this trade means, besides confirming the conclusion as to the income derived from it to the United Kingdom, if we further inquire what the share of the gross earnings which comes to us is composed of. What are the principal items? The information in the Appendices IV and V bears a good deal on this point, and may be confirmed in various ways.

The principal items are clearly—wages, victualling, insurance, repairs, renewals and depreciation, and profit. I have to submit the following table, deduced from the accounts annexed, always premising that the figures show only what is earned for the United Kingdom:—

	Per Ton.			Total for Tonnage of United Kingdom.
	£	s.	d.	Mlrs. £
<i>Sailing Vessels—</i>				
Wages	1	1	—	4
Victualling	—	11	—	2
Insurance, 7½ per cent. on mean value of £10 per ton	—	15	—	3
Repairs, renewal, and depreciation, 12½ per cent. on mean value of £10 per ton	1	5	—	5
Profit, 12½ per cent.	1	5	—	5
Total	—	—	—	19
<i>Steamers—</i>				
Wages	2	—	—	5½
Provisions	1	10	—	4½
Insurance, 7½ per cent. on mean value of £25 per ton	1	17	6	5
Repairs, renewals, and depreciation, 15 per cent. on mean value of £25 per ton	3	15	—	10
Profit, 12½ per cent.	3	2	6	8½
Total	—	—	—	33½

Summary.

	Sailing Vessels.	Steamers.	Totals.
	Mlms. £	Mlms. £	Mlms. £
Wages	4	5½	9½
Provisions .. .	2	4½	6½
Insurance .. .	3	5	8
Repairs, &c. ..	5	10	15
Profit	5	8½	13½
	19	33½	52½
Add port expenses at home, including harbour and light dues, commissions, &c.			8½
„ coals shipped in steamers from United Kingdom ..			2
Total			63

Here again little is included for the outlay on foreign vessels in English ports, while no deduction is made for the earnings of our fleet engaged in the coasting trade. Making all allowances, the figure of 60 million pounds as our foreign earnings in connection with shipping is submitted as near the mark.

The question arises whether the figures are *vraisemblable*, and it is immediately suggested as regards wages that we have a check. The number of persons employed in our mercantile fleet in 1880, not including masters, was 193,000. Dividing 9½ million pounds by this sum we get at an average money wage of £50 per man. I do not consider this a very high average, allowing for the fact that it includes the pay of masters, and officers of every grade, engineers, stokers, and others, all receiving more than the ordinary A.B. wages, which are not less than £2 10s. or £3 per month.* The averages for sailing vessels and steamers would work out about £40 per man for sailing vessels, and rather less than £70 per

* See return, "Progress of Merchant Shipping for 1880."

man for steamers, which of course include a much larger proportion of highly skilled labour.*

With regard to victualling, I think I need do no more than refer you to the paper of Mr. Bourne, already cited, in which he gives the estimate of 6 million pounds for victualling and stores for the year 1879—that is, victualling and stores put on board ships from the United Kingdom. As I understand Mr. Bourne's mode of doing the sum, this would include victuals and stores put on board foreign ships also, whereas this item in the above account only includes British ships; but the item in any case is not a large one.

The other items of insurance, repairs, renewals and depreciation, and profit require less remark. They amount altogether to 35 per cent. on the value of our shipping, which I assume to be about 40 million pounds for sailing vessels, and about 70 million pounds for steamers, in the year 1880. With regard to insurance, however, it may be pointed out that the annual replacements required by wrecks to vessels of the United Kingdom—I speak of total losses only—amount to about

150,000 tons, sailing vessels
230,000 „ steamers
<hr/>
380,000 „ total

annually. The cost of building these vessels, at £15 per ton for sailing vessels, and £30 per ton for steamers, would be about 9 million pounds, or more than the 8 millions put

* It will obviously be suggested that two deductions should be made, one for the wages of the fleet engaged in coasting, the other for wages paid abroad; but the deductions on these heads would, I believe, be immaterial, while I have sought to allow for minor corrections like these by the moderation of the estimates. In 1881, wages generally advanced above the figures here dealt with about £6 per head, or nearly £1,500,000 in all. [In the last year or two of depression there has been some decline, but the figures in the text are not seriously affected.]

down for insurance. I am inclined to think that this estimate in particular is under the mark, but I leave the figure as it stands, in case it should be thought by some that there is an over-estimate for repairs and depreciation. This last is a high estimate, though I consider it fully justified by the figures before me, shipping property ageing rapidly. With regard to the profit, in putting it at $12\frac{1}{2}$ per cent. I have kept a good deal below what more than one ship-owner owns to, but the rate is undoubtedly a good deal more than that paid by the high-class steam shipping companies whose accounts are published. There is reason to believe, however, that the latter are among the least remunerative of vessels. With regard to port expenses at home, the broad facts are that harbour, pilotage, and light dues alone would account for nearly three-fourths of the amount here stated, and only a small part would fall on the coasting fleet. The final item of coal put on board steamers at home is rendered necessary in this calculation by the exclusion from the other items of any payments abroad, which are included in the general accounts above dealt with.*

There is a concurrence of testimony, therefore, to the effect that an enormous sum accrues annually to the United Kingdom in connection with its shipping business, and that the sum of 60 million pounds is not far from the mark. First, in examining the imports and exports of the whole world, we find a difference between them which must represent the cost of conveyance, and analysing and dividing this amount

* There ought to be some further correction, perhaps, as regards the latter figures in respect of the earnings of our mercantile fleet engaged in the coasting trade, already referred to, but that portion, as already stated, is comparatively small, while these last calculations do not include anything for the earnings or profit of British owned ships not on the register of the United Kingdom.

among the principal ship-owning nations, we get a figure of about 60 million pounds as due annually to the United Kingdom for freight alone. Second, according to various testimonies—Mr. Bourne, Mr. Newmarch, Mr. McKay and others—there is known to be a large sum annually accruing in connection with the direct trade of the United Kingdom alone, a sum of 40 to 50 millions sterling, and this sum, making due allowance for what comes to us from the shipping in the indirect trade, again points to the probability of a large sum being due to us which cannot be less than about 60 million pounds. Third, the direct evidence of the accounts of numerous steamers and sailing ships points to a gross earning of this amount, if not more, deducting all outlays abroad. Last of all, there is additional confirmation in the analysis of the different items of the expenses of our fleet, and the comparison of these items with other sources of information, such as, for wages—the number of men employed, for victualling and stores—the independent inquiry of Mr. Bourne, for insurance—the sums actually spent in replacing wrecks, for profit—the actual admissions of ship-owners themselves, and the accounts of leading companies, and for such items as port expenses—the amounts actually paid for harbour and light dues. I must again repeat, however, my impression that probably a much larger sum is really due to us, in consequence both of the moderation of the estimates and the circumstance of a large number of vessels not on the register of the United Kingdom being in fact owned in the United Kingdom. It is not necessary, however, for the special purpose of this paper to name an exact figure. I shall be content if I have made clear that the business of ship-owning is really enormous, and that if we would make any use at all of the import and export figures in the question of the balance of trade, we must dwell on the invisible export

which takes place by means of our shipping. The discussion on the subject ought to include a formal treatment of the question of how much our shipping earns.*

The inquiry does not end here. I have already drawn attention to the point that the ship-owner is not the only person concerned in the cost of conveyance, of which aggregate excess of imports in the imports and exports of the world is composed. There are other commissions and charges, of which I have suggested that the English share amounts at least to 16 million pounds—perhaps 20 million pounds would be nearer the mark. The latter sum is only $2\frac{1}{2}$ per cent. on the total of our imports and exports—about 800 million pounds; and when I point out that insurance cannot be estimated at less than 15s. per cent., and bankers' commission, bill stamps, and minor charges 5s. per cent., leaving only $1\frac{1}{2}$ per cent. for all other charges, the estimate must be held to be moderate. I am afraid of too big figures, and have tried to keep well within the mark. The sum of 20 million pounds, added to the 60 million pounds due to us for freight, makes a total of 80 million pounds, which is really, to use a phrase which I have tried to make familiar, an invisible export. In using the import and export statistics for the question of the balance of trade, we have to credit ourselves, in addition to our recorded exports, with a sum of at least this amount.

Such figures, if accepted, without any further correction for interest receivable for investments abroad, would serve of themselves to revolutionise the conception of the international balance between this country and other nations, which would

* Since this paper was written, in 1882, there have been several years of great depression in freights, and the items of cost have been changed; but the gross sum earned by the fleet must still approach what is here stated, and in any case, in a discussion like this, it is the principle which is important, so that there is less need to revise the figures in order to bring them down to date.

be suggested by the bare consideration of the import and export figures. In the last few years the excess of imports, as we have seen, has been about 120 million pounds (see *supra*, p. 169), but a deduction from this sum of 80 million pounds would reduce the amount to 40 million pounds, without any correction whatever for other international transactions, such as the receipt of interest upon our foreign investments. Even apart from such a correction, then, the excess of imports is almost accounted for. A nominal difference of about 40 million pounds, subject to the qualifications already stated, is practically much the same thing as no difference at all. As we have seen, we cannot be sure to within 15 or 20 million pounds of the totals of our imports and exports and the balance shown by them, while there is also a very great probability that the sum of 80 million pounds, which I have assumed to be annually earned by the country in connection with its shipping, and other charges in connection with the conveyance of goods from country to country, is a good deal under the mark. When we establish, therefore, that 40 million pounds is a maximum sum for the apparent excess of imports, we establish that there is nothing in such a figure by itself to give us any concern about the nation living on its capital. An excess of that amount might easily be balanced by an excess in the opposite direction in other years; we must expect so great a trade as that of the United Kingdom to exhibit oscillations of this magnitude. If it is to be proved that the nation is living on its capital to any extent at all, it must be shown *aliunde*, from the operations of the stock exchanges and otherwise, that the nation is borrowing abroad, or is bringing home its capital.

The figures suggest another correction of the first impression of the import and export figures. The excess of imports being itself no novelty, and the only thing new being the

sudden increase in recent years, the question is naturally suggested whether there is any change in the invisible items of our export which would help to account for such an increase. On this head I need hardly say that nothing has been more remarkable during the last twenty years than the wonderful progress of our shipping, both in absolute amount and in relation to the rest of the world. The figures as to the United Kingdom are:—

Tonnage of Sailing and Steam Vessels belonging to the United Kingdom.

[In thousands of tons.]

	Sailing.	Steam.		Total in Sailing Tons.	Increase Per Cent. in Five Periods.
		Amount.	Equivalent in Sailing Tons.		
'80	2,637	87	348	Tons. 2,985	—
'70	3,336	168	672	4,008	30
'60	4,134	452	1,808	5,942	50
'50	4,506	1,111	4,444	8,950	50
'40	3,799	2,720	10,880	14,679	64

The business is thus a rapidly increasing one. Twenty years ago the mercantile fleet of the United Kingdom was capable of performing the work of about two-fifths only of the present mercantile fleet. Assuming the earnings to be in much the same proportion, the sum accruing to the United Kingdom in connection with its shipping would be about 27 million pounds only twenty years ago, as compared with 60 million pounds now. Even as compared with a period ten years ago, since which our mercantile fleet has increased 65 per cent., such an increase would imply that the earnings ten years ago were only about 35 million pounds, as compared with 60 million pounds now, a difference of 25 million pounds, by which our invisible exports, in connection with

the shipping alone, have increased in the ten years. Not only then is the excess of imports no new fact, but the increase of it in recent years is obviously to be largely accounted for by the increase of our shipping business.*

The increase of our shipping has been going on quite steadily all through the recent years of depression. You had the figures before you at your last meeting in Mr. Glover's very able paper; but for convenience of reference I have included in the Appendix (No. VI) a statement of the progress of our mercantile fleet in each year since 1854, from which date we are able to compare it with the excess of imports, adding a note of the estimated earnings for the United Kingdom on the basis already established. This shows a progressive increase from about 24 million pounds in 1854 to over 60 million pounds at the present time. It will be said perhaps that rates of freight have been diminishing, which is perhaps true to a certain extent; but such a reduction is allowed for in the mode of calculation adopted, the earning power of steamers being stated at three times only that of sailing ships, whereas their effectiveness is as 4 to 1. The reduction of freights cannot have been very great all round, though it may be large on some descriptions of cargo. The expenses, owing to the rise of wages, notwithstanding the great economy of iron as compared with wood, and the economy of labour by means of large vessels and the substitution of steam for sailing, still remain very large, both per ton per annum and per voyage.

The other charges for conveyance accruing to a country like the United Kingdom must also have increased greatly

* See also on this head Appendix X, already referred to, showing the great increase in recent years of weights carried in the direct foreign trade of the United Kingdom, where weights are stated or can be calculated.

during the last twenty years. The charge of $2\frac{1}{2}$ per cent. on the foreign trade of twenty years ago would have been under 10 million pounds, as compared with 20 million pounds now.

These corrections will best be shown in a short table, for which I have made use of the figures in Table III. already summarised (see *supra*, p. 169) :—

Average Annual Excess of Imports as Summarised above (supra, p. 169) Corrected by Deducting (1) the Charges for Gross Earnings of Shipping as shown in Appendix VI.; and (2) the Charge of $2\frac{1}{2}$ per Cent. for Commissions, Insurance, &c., on the Total Amount of the Direct Trade of the United Kingdom.

[In millions of pounds.]

	Total Imports and Exports.	Apparent Excess of Imports.	Charges to be Deducted.			Corrected Excess.
			Freight, &c.	Commission, Insurance, &c.	Total.	
	£	£	£	£	£	£
1854-56	330	37	25	8	32	5
'57-59	386	31	27	10	37	(-) 6
'60-62	432	53	28	11	39	14
'63-65	523	60	34	13	47	13
'66-68	566	67	37	14	51	16
'69-71	617	61	39	15	54	7
'72-74	732	61	46	18	64	(-) 3
'75-77	713	121	51	18	69	52
'78-80	690	119	58	17	75	44

This table needs no comment. The figures are not presented as exact, but they show approximately the difference between the real and the apparent excess, and one of the reasons for the apparent excess increasing in recent years.

There remains the more general question of the balance of indebtedness between nations, all the points yet dealt with, the imports and exports themselves, and the sum accruing to the United Kingdom for the gross earnings of its mercantile fleet and for other charges of conveyance being

only items in a more general account. On this head, however, I may be permitted not to enlarge. It is notorious that a large sum is due to this country annually for its investments abroad; we belong, as has been seen, to a geographical group which has probably such interest to receive. The usual estimate has been about 50 million pounds to 60 million pounds a year; but since these estimates were made our investments abroad have increased enormously, the public issues on foreign account of the last six years alone, *i.e.*, since the foreign loan collapse of 1875 on the London Stock Exchange, having been about 210 million pounds, this figure not including, moreover, some very large issues, in which the London Stock Exchange was interested, but where the issue was abroad. (See Appendix VII.) I am disposed to think also, from a consideration of the enormous investment of capital in the movement of goods in our ships, and in the conduct of our trade in foreign countries themselves, that this private capital has never been sufficiently estimated, and that our investments of capital abroad at the present time are not less than 1500 million pounds sterling, on which interest at only 5 per cent. would be 75 million pounds per annum, at 6 per cent. 90 million pounds per annum, and at 7 per cent. 105 million pounds per annum. Whatever sum we take, looking at the small magnitude of the excess of imports which remains after proper corrections for the charges of the cost of conveyance, there can be no question that in recent years, large as the apparent excess of imports has been, this country has been continuing to invest capital abroad—from 40 million pounds to 60 million pounds per annum, if not more. But for this lending, the excess of imports would have been still greater than it has been.

I do not propose to go farther into this question of the balance of indebtedness in its international transactions for

the United Kingdom. To complete it would require an elaborate investigation of the magnitude of private investments, while such points as the expenditure of British citizens abroad, and the expenditure by foreigners in this country, and the minor movements of international capital in connection with exchange operations, would all require to be considered. To treat this subject properly would require a paper by itself almost as long as the one now before you, which is already of ample dimensions. I shall be quite content if I have established to your satisfaction (1) that the question to be investigated is not that of the diminution, but of the increase, of our investments abroad—that there is really no question at all of the nation bringing home capital or living on its capital in recent years; and (2) that, whatever may be our conclusion on this point, the import and export figures themselves are only a small part of the question, and that the use of these figures by some writers as if they were the whole, is only to be excused, if it is excusable, on the score of ignorance of the nature of statistics and the necessary conditions of dealing with them.

V.—SUBJECT CONTINUED: THE EXCESS OF IMPORTS OR EXPORTS IN FRANCE AND THE UNITED STATES. CONCLUSION.

Mutatis mutandis, all these points have to be considered of course in dealing with foreign nations. I shall only consider two, the United States and France. The United States is the country which has perhaps the largest excess of exports. In the last six years, including bullion, that excess has been 37 million pounds annually. (See Appendix VIII.) The United States is practically a country whose exports, apart

from the question of interest on borrowed money, ought to balance its imports, its foreign shipping being quite insignificant, earning for it probably, according to the above calculation of £5 per ton for sailing ships, about 6 million pounds a year only. How then is the excess of exports to be accounted for? What economic circumstances or conditions does it imply? I have to suggest two things: (1) the expenditure by United States citizens travelling abroad less the expenditure of foreigners travelling in the United States; (2) the interest payable to foreigners on account of foreign capital invested in the United States. The former cannot be less, I believe, than 10 million to 15 million pounds, the annual migration of Americans to Europe being 20,000 to 30,000 in addition to an American colony of several thousands almost constantly resident in Europe, and the latter cannot be less than 30 million pounds; total 40 million pounds. Even if the latter ought to be a smaller figure, we should still have to consider the margin of error in the United States figures, especially those for the imports, on account of the undervaluations, smuggling, &c., so that the apparent excess of exports would be more than the real excess, because of the imports being undervalued. There is certainly nothing in the excess of exports to indicate unusual prosperity, whether present or prospective. The recent increase of the exports, and of the excess of exports, is also to be accounted for by the fact that in the last twenty years American foreign shipping has been diminishing in proportion to its total trade. That trade twenty years ago was 135 million pounds only, the tonnage of American shipping in the foreign trade being over $2\frac{1}{2}$ million tons, which, at the rate of £5 per ton, would entitle it to a gross income of $12\frac{1}{2}$ million pounds a year. Now the trade is 347 million pounds, and the earnings from the shipping must be about 6 million pounds only.

There is ample reason, therefore, for the excess of imports in the American trade ceasing, and an excess of exports beginning, apart from the farther obvious explanation that America borrowed large sums abroad during the civil war and afterwards, the interest of which has now to be paid. It seems a nice question whether America of late years has been reducing its indebtedness abroad, but there is nothing, at least in the import and export figures, corrected as they ought to be, to indicate such a reduction. I am only concerned, however, at present, with pointing out the nature of the inquiry which must be made.*

As regards France, the account stands as follows for the last twenty years (see Appendix IX.):—

[In thousands of pounds.]

	Excess of				Excess of	
	Imports.	Exports.			Imports.	Exports.
	£	£			£	£
1860 ..	..	13	'71 ..	19	..	..
'61 ..	14	..	'72 ..	..	..	8
'62 ..	..	3	'73 ..	..	..	7
'63 ..	..	14	'74 ..	20½	..	..
'64 ..	..	17	'75 ..	12½	..	..
'65 ..	..	15	'76 ..	40½	..	..
'66 ..	1·5	..	'77 ..	29½	..	..
'67 ..	27	..	'78 ..	53	..	..
'68 ..	34	..	'79 ..	48	..	..
'69 ..	15	..	'80 ..	53	..	..
'70 ..	7½	..				

* See also the previous Essay on the Foreign Trade of the United States. I may add too a fact, of which I was not aware when I wrote this paper, that the system in America is to value the imports not at the port of arrival, but as at the place from which the goods were sent. The value in America therefore does not include the cost of conveyance, and the proportion of the exports is accordingly higher than it would otherwise be as compared with a country like England, where the value of the imports does include the cost of conveyance.

Here the excess of imports is less marked than it is in the case of the United Kingdom, and there has been a smaller increase in the excess in recent years compared with six or seven years ago. The explanation, no doubt, is that French shipping is comparatively small, being 932,000 tons, and has increased very little in recent years, the only change being that since 1860 about 200,000 tons of steam shipping have been substituted for as many tons sailing, the total rather diminishing. The total gross earnings for France, at the same rate as for England, can only be about 6 million pounds, and the increase in twenty years little over 2 million pounds. At the same time, leaving out our shipping, the excess is as great in proportion for France as for the United Kingdom. There can be little question that France has increased its investments abroad, notwithstanding the payment of the indemnity, while it must derive a large income annually from the expenditure of foreigners travelling or residing in France, French citizens by comparison going very little abroad. It would be interesting for France as for England to trace the growth of its foreign investments in recent years, but the problem of stating its balance is neither so large as that for England nor so complicated in various ways. The figures, however, when rightly considered, are in apparent accordance with the economic circumstances of the country, while they teach nothing as to comparative prosperity or the reverse.

The broad conclusion is that the importance attached in some of the recent discussions to the excess of imports in any country, and to the increase of that excess in this country in recent years, and contrariwise to the excess of exports in the case of other countries, and to the increase of that excess, is wholly mistaken. There is nothing in the facts either way to indicate special circumstances of prosperity or adversity,

or that one nation is living on its foreign capital, and another increasing its foreign capital or diminishing its indebtedness abroad. The facts when investigated throw a great deal of light on the industrial circumstances of different countries, but until investigated and compared with other facts they are entirely without meaning. In other words, import and export figures require delicate and careful handling for any such inquiry as the account of indebtedness between nations. *Quod erat demonstrandum.*

VI.—IMPORT AND EXPORT STATISTICS AND THE PROTECTIONIST CONTROVERSY.

THE second special inquiry I have proposed is the way to use import and export figures in the controversy between free traders and protectionists. How do the statistics assist?

In answering this question, we must be struck by the fact that there can hardly be any statistics available to settle directly the cardinal question between free trade and protection, viz., which *régime* favours most the general prosperity of a people, morally as well as materially. No such question can be treated practically from a material point of view alone; political and moral considerations must come in. I could quite understand a free trader admitting a protectionist system to be the best materially, and a protectionist admitting the free trade system to be the best materially, and yet each on moral and political grounds preferring the less advantageous system in a material view. But how difficult to trace out all the effects of an economic *régime* in the moral and

political sphere! Even materially, however, there can hardly be adequate statistics. To make any statistical comparison at all possible between different *régimes*, it would be necessary either to find two countries practically alike in their economic and industrial circumstances, and in the character of their people, subject them to the opposite *régimes*, and then ascertain and compare their relative material progress; or to find a particular country subjected at different periods to the two opposite *régimes* without any other differences, and then compare the different results, if any such are appreciable. Experience does not supply us with such cases. No two communities are sufficiently alike to be comparable in strict logic. The slightest differences in the race or moral condition of the two communities which are to outward appearance much the same, might make a great deal of difference in their material progress. If the two are subjected to different economic *régimes*, how are we to tell whether the inferior progress of the one materially—even when we are sure about the inferiority—is due to the *régime*, and not to other differences in the character of the communities, which we cannot so well appreciate? The same with a community at different periods of its own history. How can we tell that there is no moral difference of a serious kind to affect the economic progress of the community between one period and another? External economic circumstances are, besides, incessantly changing, and may affect two communities apparently of much the same character and position quite differently. If it were possible to institute many pairs of comparisons and exhibit a uniform result in all, it might be safe to infer that it was the *régime* which did make the difference, no other uniform cause of difference being assignable; but this condition of course it is impossible to fulfil.

Quite lately an interesting attempt has been made by Mr.

Baden-Powell,* to show that the *régime* does make all the difference in the case of two communities which he compares—New South Wales and Victoria, the former free trading and the latter protectionist; but directly, I fear, the comparison proves nothing. In strict logic one comparison is not enough. There must be many comparisons. It may be doubted, moreover, as regards this particular case, whether the two communities compared were really in sufficiently like circumstances at starting to make the comparison really valuable; while it is not shown that no other circumstances besides the economic ones may have helped to make the difference since; nor is it shown that the difference of the *régime* itself was so great as to justify us in calling the one colony free trading and the other protectionist. But granting the apparent likeness of the two cases in all except the one point, what I have to urge is that one comparison proves nothing in strict logic, and at best does no more than raise a presumption to be confirmed or set aside by farther inquiry.

There would be a farther difficulty in making such an inquiry statistically, in the facility with which the visible consequences of an inferior *régime* may be masked by an increase of industry on the part of the suffering community to make up the loss. The community, rather than lose in the return to its labour, might labour more energetically, and so the outward result would be as before—the production, consumption, and saving might remain what they were. It is even conceivable that the community suffering most might apparently gain, in consequence of a greater development of industry and energy than what is absolutely necessary to supply the loss. In any case, I am quite ready to believe

* 'Fortnightly Review,' March, 1882.

that the visible difference, as between free trade and protection, if the protection is not extreme, may often not be so great as to be traceable by statistics. Suppose the protected industries in a country giving protection to be one-tenth of the whole, or the industries which might be protected in a free trading community, but which are left free, to be also one-tenth, which is a large proportion, and that the loss arising to the community by the diversion of capital and labour from more profitable to less profitable employments is 10 per cent. on the production of this one-tenth of the people; then the loss to the whole community—the difference it makes—is only 1 per cent. of the total production. Even if the diversion should cause a waste of 25 per cent. in the protected industries in the one case, and the unprotected industries in the other case, the difference to the whole community would still be only $2\frac{1}{2}$ per cent. Such small margins, it is obvious, may be lost sight of among other things, and easily made up by a little more industry on the part of those who suffer. They may also affect still less the growth of wealth, through the community bearing what loss there may be out of its income and accumulating wealth as rapidly as before. There is an inherent difficulty, then, of a very formidable kind, in showing by statistics that any given economic *régime* is more favourable to the material welfare of a community than another. Unless the differences are extreme and marked, it seems hardly possible that there can be much difference in the results, of which statistics can take note, whether a community is free trading or protectionist.

Such being the case as regards statistics generally, it is hardly necessary to add that import and export statistics alone cannot give much help. They are even irrelevant to the question to be answered. It is quite conceivable that a country may be very prosperous without foreign trade at all,

or with very little foreign trade, or that for special reasons the foreign trade of the least progressing country as a whole may be making greater progress than the foreign trade of a more progressing country. Were the British Empire, for instance, to form one customs union, the foreign trade of that union would probably be less than the foreign trade of the United Kingdom alone is now, and its growth or decline would be less important in proportion to the whole business of the empire than the growth or decline of the foreign trade of the mother country is now to the mother country itself. The progress of the foreign trade of different countries is thus no index at all of their relative progress materially. Even therefore if you could reduce the so-called imports and exports of different countries to common denominators, and make all proper allowances for changes of prices and the like disturbing influences, which I have already shown to be most difficult, you would be no nearer than you were before to proving that the country whose foreign trade increases fastest is the most prosperous materially. There is a more serious difficulty still. Foreign trade is trade between nations, and the foreign trade of a country which has an inferior *régime*, may consequently increase as much in amount, and perhaps infinitely more in proportion, than the foreign trade of a country with a superior *régime*. The trade of the inferior may be with the superior, and the two will increase *pari passu*, though the impetus may be given by the superior and not by the inferior. We may see this very clearly if we put the hypothetical case of two countries, the one free trading and the other protectionist, trading exclusively with each other, that is, having no other foreign trade, with a third country doing no trade itself but carrying for the two others. Clearly, the foreign trade of the free trading and protectionist countries must exactly balance. Their imports and exports

will be exactly alike. Whether, to give a practical illustration, the foreign trade of the United States with the United Kingdom has been the result of the impetus of the former or the latter will, I think, hardly be open to question. It is the United Kingdom which by its purchases has stimulated the foreign trade of the United States, small as that trade is compared with our own. In any case, these considerations show sufficiently that the increase of foreign trade proves nothing by itself as regards the relative material prosperity of different countries. The circumstances affecting foreign trade, besides the differences of *régime*, are innumerable; and above all, it is a necessity that countries with different *régimes* should trade with each other, so that the greater prosperity of free trade countries may cause the foreign trade of protectionist countries to advance more rapidly than that of their own.

But while statistics are thus not available in giving a distinct yes or no to the cardinal question between free trade and protection, it does not follow that they are of no use at all. Rightly used and handled they may contribute materially to the solution of the points at issue. I have to suggest various ways in which they may be so used.

First. The proposition, if accepted, that statistics are not available to prove directly the superiority of one *régime* to another in promoting material prosperity, appears to be entirely on the free trade side of the argument. It is the protectionist on whom the onus of proof lies. He affirms that if the State interferes with trade and does certain things, the greater material prosperity of a country will ensue. He is bound therefore to furnish proof that the State ought to interfere, and interfere in the way indicated. The free trader, on the other hand, need not prove anything at all. He simply wishes to let things alone unless it can be shown that

something should be done ; the whole onus of proof is on his opponent. When it appears, therefore, that statistics cannot be appealed to in the direct issue between free trade and protection ; that statistics can hardly be got to indicate in any way the superiority of one *régime* to another ; this is as much as to say that the protectionist is not helped by statistics. One great branch of argument is cut away from him. Logically then the unsuitability of statistics, owing to their necessary imperfections, for solving the direct issue between free trade and protection, is a material fact. In pointing out that they are unsuitable we do a great deal to destroy the protectionist case.

It may be asked, then, how it is that the protectionist appeals so much to statistics—that he talks of the greater increase of prosperity in protectionist countries, of the greater increase relatively of the foreign trade of protectionist countries, of special industries promoted by protection, and so forth ? The reply is that very often the facts appealed to are themselves misunderstood, being, as we have seen, very difficult to read, while their logical treatment is a difficult matter. I notice in all these discussions that the statement of the major premiss is avoided. The protectionists do not make clear to themselves what they wish to prove. They show, for instance, that the United States is prosperous ; but that is not what they have to prove. What they have to prove is that it is more prosperous than it would have been under a free trade *régime*, a statement in which statistics cannot help them. They assert, again, that the foreign trade of protectionist countries increases faster than that of free trading countries ; but what they have really got to prove is not only that it increases faster than that of other countries, but that it increases faster than it would have done under free trade, and that this more rapid increase is itself an index

of greater growth of material prosperity generally than would have otherwise taken place. The proof again that special industries have been fostered by protection is *nihil ad rem*. What has to be proved is that the industry of the country as a whole has prospered, which is a very different thing. Without discussing, then, the whole case between free trade and protection, we are entitled, as a scientific body, to point out that the call which protection makes on statistics is one which cannot be answered. The protectionist seeks an affirmative answer to a question which statistics cannot answer affirmatively or negatively.

We may perhaps go farther, and say that as the protectionist relies so much on statistics, and has nothing else to rely on,—his argument is always an appeal from theory to facts—then there can be no argument for protection. This appears, in fact, to be the logical position of the controversy.

VII.—SUBJECT CONTINUED: THE NEGATIVE USE OF IMPORT AND EXPORT STATISTICS.

Second. While statistics can be of no use to the protectionist, they may be of use to the free trader, negatively, by affording presumptive conclusions that the anticipations of the protectionists are unfounded. The protectionist, in arguing that a country will be better off under protection than under free trade, implies and assumes that the condition under free trade will not be satisfactory, that this is the reason for not letting things alone. If, then, it can be shown that, taking countries as they stand, the condition of things is tolerably satisfactory under free trade, the difficulty of the protectionist would be enormously increased. The reverse,

as we have seen, would prove nothing against free trade logically, but if free trade, on the average, appears to do as well, or better than protection, the protectionist is clearly out of court. His only appeal is to statistics, which could not by any possibility help him; but if the answer they give, as far as it goes, makes against him, he is hopelessly in the wrong.

Looking at economic statistics generally in this way, it is plain that free trade nations, and especially the United Kingdom, have nothing to complain of. The fact of the United Kingdom having made great strides in material prosperity since the free trade period is undeniable, and is not really denied by protectionists. Of late, they say, owing to foreign tariffs and other causes, the results are less satisfactory, and they shake their heads ominously about the future, but the advance in the past, I apprehend, is not denied. If it is desired, I think there are ample materials in our *Journal* to prove the contrary, so that a mere passing reference may be sufficient for me to-night. The satisfactory result may not be wholly due to free trade, and no free trader ever said that it was; Mr. Newmarch's repudiation of any such idea, in his paper read in 1878, was most emphatic; but it has been consistent with free trade, and it is upon protectionists to prove that the result with protection would have been better.

We are concerned to-night, however, with import and export statistics specially, and on this narrower field I may perhaps be allowed to refer to one or two facts which appear to raise an insuperable presumption against protection. I should not think of going into the history of our foreign trade exhaustively, the subject having been treated so fully by Mr. Newmarch in 1878, and our special business to-night being with the method of statistics; but without exhaustive treatment a few broad facts can be made to stand out clearly

enough. Before pointing them out, however, I must again call attention to the remark already made, to the effect that the progress of foreign trade is not necessarily an index of the progress of material prosperity in a country generally. It may or may not be so. But conceding it to be an index, the facts of our experience are not such as to encourage a protectionist to appeal to them. Our progress has been astonishing. The protectionist may imagine, or say he imagines, that under protection we would have done better, but surely he cannot deny that under free trade we have done well.

The first facts to be mentioned are those relating to the movements of shipping. Of these you had a very full account at the last meeting, and I have said a good deal to-night about the growth of our shipping business as a separate business; but I wish now to speak of those movements as an indication of the growth of imports and exports. To some extent they are a better indication than the figures of imports and exports themselves. The latter may fluctuate, as we have seen, owing to changes of price; but if increased quantities of goods are carried, whatever nominal sums they may be entered at, you must have more ships. It is quite true, of course, that shipping may increase disproportionately to the trade through the articles handled being more largely of a bulky and less valuable nature than before; but this is a point which can easily be inquired into. The entries and clearances of shipping, then, in the foreign trade of the United Kingdom during the last forty years have progressed as follows:

	Tons.	Increase on Previous Ten Years.	
		Amount.	Per Cent.
1840	9,440,000	—	—
'50	14,505,000	5,065,000	53'4
'60	24,689,000	10,184,000	70'2
'70	36,640,000	11,951,000	48'6
'80	58,736,000	22,096,000	60'4

And the increase from first to last, between 1840 and 1880, covering the whole free trade period, is no less than 49,296,000 tons, and 525 per cent. To be quite fair, even in dealing with protectionists, it may be admitted that the increased use of steamers which do a calling trade may have caused some increase of entries and clearances without an increase of goods carried to correspond; but the self-interest of ship-owners may of course be trusted to fill up their vessels as much as possible. Comparing the figures with the increase of population in the interval, it appears that while the entries and clearances in 1840 were 0·36 tons for each unit of the population, in 1880 they were 1·73 tons for each unit of the population, an increase of 381 per cent.

We may give some idea of these figures in another way. The entries and clearances of shipping in the foreign trade of almost all foreign countries put together, excluding British colonies, may be taken as 140 million tons.* The increase of our entries and clearances, therefore, since 1840 is equal to one-third of the whole existing business of all foreign countries put together. Assuming imports and exports, therefore, to have increased in the same proportion, we may say broadly that the increase of the foreign trade of the United Kingdom since 1840 is equal to one-third of the

* See Statistical Abstract for Foreign Countries.

whole foreign trade of the world, not comprised within the British Empire. The increase, moreover, is equal to about $1\frac{2}{3}$ tons for each individual of the United Kingdom, or five-sixths of a ton of goods conveyed each way. If a growth of foreign trade like this does not please protectionists, what sort of trade is it which will satisfy them?

We come then to the suggestion that the goods have changed in character. They are said to be more bulky than they were. This is especially the case, we may be told, with the exports, where the increase is chiefly in coal and pig iron, in raw materials. But this does not prove that the real values involved have not risen in proportion. On the contrary, it is probable that, value for value, an export of so much coal or pig iron implies a much larger employment for labour and capital within the country than an export of so much cotton manufactures. The whole value in these cases is an export of the produce of British capital and labour; whereas, in the case of cotton manufactures, four-fifths or two-thirds of the value may be a re-export. In other words, 10 million pounds worth of coal exported may mean an export of as much produce of British capital and labour as 50 million pounds worth of cotton manufactures. Not only so: the fact that, value for value, an export of coal or pig iron employs more shipping than an export of cotton manufactures, implies, as the shipping is mostly British, that there is an immense indirect employment for capital and labour in connection with the shipments. We may assume then that the increase in the movements of shipping is a very good index of the increase in the imports and exports themselves.

We may look, however, at the actual facts of a few chief articles, always remembering the circumstances pointed out by Mr. Newmarch in the paper already referred to, that the

part of our foreign trade which has most conspicuously increased is the miscellaneous trade. Take first the exports of cotton yarn and piece goods. The progress we find is shown as follows :—

	Cotton Yarn.			Cotton Piece Goods.		
	Total.	Increase on Previous Ten Years.		Total.	Increase on Previous Ten Years.	
		Amount.	Per Cent.		Amount.	Per Cent.
	Mln. lbs.			Mln. yds.		
1840 ..	118·5	—	—	790	—	—
'50 ..	131·4	12·9	11	1,358	567	72
'60 ..	197·3	65·9	50	2,776	1,418	104
'70 ..	186·0	(-) 11·3	(-) 6	3,267	491	17½
'80 ..	215·5	29·5	16	4,496	1,229	38

Note.—Percentage increase between 1840 and 1880: cotton yarn, 84 per cent., and cotton piece goods, 468 per cent.

On the same plan I make up the following short tables :—

Exports of Iron and Steel.

	Tons.	Increase on Previous Ten Years.	
		Amount.	Per Cent.
	Mlns.		
1840	0·3	—	—
'50	0·8	0·5	167
'60	1·4	0·6	75
'70	2·8	1·4	100
'80	3·8	1·0	36

Note.—Percentage increase between 1840 and 1880 equal to 1167 per cent.

Exports of Hardware and Cutlery.

		Value.	Increase on Previous Ten Years.	
			Amount.	Per Cent.
		Mln. £'s.		
1840	.. ..	1'3	—	—
'50	.. ..	2'6	1'3	100
'60	.. ..	3'8	1'2	46
'70	.. ..	3'8	—	—
'80	.. ..	3'5	(-) 3	(-) 8

Note.—Percentage increase between 1840 and 1880 equal to 169 per cent.

Exports of Machinery.

		Values.	Increase on Previous Ten Years.	
			Amount.	Per Cent.
		Mln. £'s.		
1840	.. ..	0'6	—	—
'50	.. ..	1'0	0'4	67
'60	.. ..	3'8	2'8	280
'70	.. ..	5'3	1'5	40
'80	.. ..	9'3	4'0	75

Note.—Percentage increase between 1840 and 1880 equal to 1483 per cent.

Exports of Coal.

		Tons.	Increase on Previous Ten Years.	
			Amount.	Per Cent.
		Mlns.		
1840	.. ..	1'6	—	—
'50	.. ..	3'4	1'8	112
'60	.. ..	7'3	3'9	115
'70	.. ..	11'7	4'4	60
'80	.. ..	18'7	7'0	60

Note.—Percentage increase between 1840 and 1880 equal to 1070 per cent.

These tables of course are not, and do not pretend to be exhaustive as regards foreign trade, while if they were exhaustive, many questions would be suggested as to the precise character of the increase, the countries with which it takes place, and other particulars. Comparing these exports, however, with the above stated facts as to shipping, they serve to show what a gigantic growth we are dealing with. It is difficult to imagine what foreign trade there can be which increases more rapidly. I have omitted giving any quantities for the imports, for the practical reason that the quantities of our importations are less in dispute, but they are easily enough accessible to all concerned.

The facts as to quantities being thus clear, we are able to use the facts as to values. The whole exports of British and Irish produce between 1840 and 1880, according to the declared values, have been :—

			Increase on Previous Ten Years.	
			Amount.	Per Cent.
			£	
1840	..	..	51·3	—
'50	..	..	71·4	40
'60	..	..	135·9	90
'70	..	..	199·6	47
'80	..	..	223·1	12

and the increase between 1840 and 1880 is 335 per cent. There are some points in detail to be observed upon, but the progress generally is evidently as remarkable as that of entries and clearances of shipping and the quantities of the principal articles of export, and, taken in conjunction with these facts, gives fair ground for supposing that the whole foreign export trade in quantities, as well as values, has increased in about the same degree.

Dealing with values alone, as regards the imports, we get the following comparison :—

			Increase on Previous Decade.	
			Amount.	Per Cent.
			Total.	
			Mln. £'s.	
1854*	..	..	143·5	—
'60	..	..	210·5	67·0
'70	..	..	303·2	92·7
'80	..	..	411·2	108·0
				50
				44
				36

* In the case of the imports, there are no computed or declared values before 1854.

and the increase since 1854 is 186 per cent. Thus both in imports and exports there has been an enormous increase for the United Kingdom during the free trade period—an increase which has been demonstrated to be as great in quantities as in values in the case of the exports, and which is presumably so in the case of the imports, though it would encumber this paper too much to go into detail. As regards imports at least, there can be no question of its having continued to the latest date. There is no apparent falling off in the last few years to account for.

Clearly, then, in these figures the protectionist has a very difficult argument. If our foreign trade had progressed less, the onus of proof would still have been on the protectionist to show that under another *régime* it would have progressed more; logically, figures showing a less progress would not have helped his argument a bit. But the figures being what they are, he has to prove that protection would have had a better result, and promises better in future. He must

“Gild refined gold, and paint the lily.”

Thus, negatively, the statistics of foreign trade are useful. The prosperity of the last forty years may not be owing to free trade, but it has been consistent with free trade, and protectionists must look elsewhere than in our import and export statistics for any argument against free trade policy.

There are one or two points, however, which are likely to be cavilled at, though the figures themselves will help to supply an explanation. There is apparently a little support given by some of the figures to the contention that in recent years foreign trade has ceased to progress quite as rapidly as it did at an earlier period. The increase in the export values is only 12 per cent. in the last decade, as compared with 47 per cent. in the previous decade, 90 per cent. between 1850 and 1860, and 40 per cent. between 1840 and 1850. There is a similar diminution in the quantities of the principal articles exported, though not in all; while in one decade at least, viz., between 1850 and 1860, the proportionate growth of the movements of shipping was a little greater than it has been since. A little consideration will show, however, I believe, that while there were probably real causes between 1850 and 1860 for a greater proportionate increase of our foreign trade than there has been since—such causes as the great growth of railways between 1840 and 1850, which came really into use between 1850 and 1860, the gold discoveries, and the great colonisation which went on in the latter decade—yet the diminution in the rate of increase lately is much less than it appears to be. The period between 1850 and 1860 was the one in which the first effect of the gold discoveries, which beyond question raised prices considerably, was experienced. In the period since 1870 there has been a general decline in prices, aggravated, specially as regards our own exports, by a special decline in

cotton. Keeping in mind then the important element of price, we see reason at once for looking more to the quantities and to the movements of shipping than to the values only. The figures, in fact, corroborate what has already been stated in the first part of this paper as to the importance of price. Unless we allow for this element, we shall be bewildered by the figures.

The point is perhaps worth even more minute consideration. Comparing the percentages of increase of the values of the exports and of the movements of shipping, we get the following results :—

	Increase of Shipping Movements.	Increase of Export Values.
	Per cent.	Per cent.
1840-50	53·4	40
'50-60	70·2	90
'60-70	48·6	47
'70-80	60·4	12
1840-80	525·0	335

Thus between 1840 and 1850, before the gold discoveries had caused prices to rise, and when they were probably tending to decline, the increase of shipping was rather more than the increase of export values ; in the following decade, when prices were undoubtedly rising, the increase of export values is more than the increase of shipping movements ; in the third decade, viz., between 1860 and 1870, when prices were probably stationary, the rate of growth is about even in the two cases ; in the last decade, when the level of price has probably declined considerably, the rate of growth of shipping remains much the same as in the previous decades, but the rate of growth of the export values shows a diminution. To my mind the suggestion of this table as to a fall of

prices between 1870 and 1880 is most direct, and such questions of price, I am satisfied, will require to be more and more considered. We have not had import and export figures on a tolerably satisfactory basis for many years to deal with, and we are only beginning to find out the difficulties of using them when long periods are compared. Meanwhile the practical conclusion appears beyond question.

I have to suggest, moreover, what has already been stated in the previous part of the paper as to the increase of our shipping business as a means of accounting for the non-increase of our apparent exports. It is because our invisible exports have been increasing so enormously, that there is less increase of the visible. But it is the same thing of course whether we export the produce of our capital and labour stored up in goods, or in the shape of repairs to ships, or new ships built to replace old ones, which carry the foreign goods of the world. In any way that we take the figures, there has obviously been an enormous growth of our foreign trade since the free trade period, continued to the most recent date. What the protectionist has to prove is that protection would probably have done better or as well.

It would be impossible to go through the imports and exports of foreign countries in detail, to show how they also raise a presumption against the protectionist. Looking at the difficulties of analysing the data themselves, and allowing for special circumstances which may have affected the foreign trade of different countries, the difficulty of inquiring what the facts are as regards foreign countries, and of finding suitable pairs of free trading and protectionist countries for comparison, would in truth be insuperable. To mention only some of the difficulties which occurred to me in endeavouring to form a group of protected European countries, I may state that the fact already mentioned as to the recent change from

official to real values in Austria, throws out all comparisons as regards that country ; and that for Russia comparisons are equally thrown out by the recent depreciation of the rouble and rise in nominal prices, which unduly swell the figures of the foreign trade, while a reduction of the rouble to specie value in each year would be open to some exceptions. For Germany, again, we have statistics for ten years only, too short to be of any value. This leaves no other country than France among the great European States as to which a special inquiry would seem worth while, and even as regards France we have also to remember that the separation of Alsace and Lorraine ten years ago was a special cause of increase in the foreign trade, what was home trade in France becoming in fact foreign.

In the absence of any general grouping, then, I shall refer specially to two foreign countries only—the United States and France—the former a protectionist country, which became in the period under review more protectionist than at the beginning, and the latter a protectionist country, which became less protectionist. Is there anything on the face of the figures of either country to suggest such a progress in their foreign trade, assuming that trade to be a good index of material prosperity, as to imply that protection is a specially advantageous *régime* ?

With regard to the United States, making a table in much the same form as that for the United Kingdom, but including specie, the general figures are :—*

* I make use here of the figures in the previous Essay on the Foreign Trade of the United States.

Foreign Trade of the United States.

[In millions of pounds.]

	Imports.			Exports.		
	Amount.	Increase on previous Period.		Amount.	Increase on previous Period.	
		Increase.	Per Cent.		Increase.	Per Cent.
	£			£		
1840 ..	21	—	—	26	—	—
'50 ..	36	15	72	30	4	16
'60 ..	72	36	100	80	50	165
'70 ..	92	20	28	90	10	12½
'80 ..	152	60	65	170	80	89

And the increase in the imports for the whole period is nearly 700 per cent., and in the exports between 500 and 600 per cent. In *proportion*, therefore, there is a greater rate of progress in protectionist America than in free trade England, though, if we take the whole period, not so much greater an increase as to raise any presumption in favour of protection as being more likely to develop the foreign trade. I need hardly say, however, that in such a question the mere proportion of increase is not the proper test. The amounts are also material, and it cannot fail to be observed that the United States being a larger unit than the United Kingdom, has at the beginning, and still has, a smaller foreign trade. The whole imports are, in fact, 150 million pounds only at present, as compared with 400 million pounds and upwards into the United Kingdom; and the whole exports are 170 million pounds, as compared with 223 million pounds of domestic produce exported from the United Kingdom; the latter figure, besides, as already explained, not including the invisible export in the shape of outlay for earning freight.

The increase in imports again between 1840 and 1880, is 130 million pounds, as compared with an increase of 268 million pounds into the United Kingdom since 1854 only; while the increase of the exports between 1840 and 1880 is 144 million pounds, as compared with 171 million pounds in the case of the United Kingdom, again remembering in the latter case that our invisible exports have increased so much, and are not reckoned in this calculation.

These figures, then, rather suggest, if anything, the superiority of a free trading to a protectionist *régime*. They are something for the protectionist to get over if he appeals to progress in imports and exports as a proof of the superiority of protection. No doubt in any complete discussion we should have to analyse minutely what the foreign trade in each case is composed of; while it would be fair to allow, I think, that the United States, from its geographical extent and the ancient development of its manufactures—for the eastern States are as much an old country as England—may have a smaller foreign trade in proportion than another country of less extent with large manufactures, or another country of large extent without manufactures. It is an empire within a ring fence, and the foreign trade of the British Empire, if that empire were made a customs union, would, as already stated, be less than the foreign trade of the United Kingdom now is, and certainly much less in proportion to the home trade. Still all these nice considerations are out of place in the mouths of protectionists, who have dwelt lately on the wonderful progress of the American foreign trade. The figures, in the way they use them, turn against themselves.

Coming to the French figures, I have to submit a similar table, beginning, however, in 1850 only, as there are only official values in 1840:—

General Imports into France, and Exports of Domestic Produce.

[In millions.]

	Imports.			Exports.		
	Amount.	Increase on previous Period.	Per Cent.	Amount.	Increase on previous Period.	Per Cent.
	£	£	—	£	£	—
1850 ..	45	—	—	43	—	—
'60 ..	106	61	135	91	48	109
'70 ..	140	34	33	112	21	22
'80 ..	245	105	75	139	27	22

Here again the rate of growth is apparently as great as that of the United Kingdom, though an exact comparison is impossible, as we cannot go back to 1840. The amount of trade and amount of growth, however, are, like those of the United States, much smaller than the amount and growth of our own trade, although France, like the United States, is a larger unit. In the imports the growth is 200 million pounds between 1850 and 1880, as compared with 286 million pounds in the United Kingdom, between 1854 and 1880, and in the exports it is 96 million pounds between 1850 and 1880, as compared with 151 million pounds in the same period in the United Kingdom. There is nothing then in the French figures to make a case for the protectionist, while there is ground for claiming that between 1860 and 1880 France had made considerable steps in the direction of free trade, so that whatever progress had been made might be ascribed to free trade, and not to protection. There is no need, however, to press this point. France may be taken as a protectionist country. There is surely nothing in the figures to raise any doubt of our free trade *régime*, always remembering, besides, our own invisible exports.

It is interesting to note, in passing, the great augmentation

of French trade between 1850 and 1860, a sign of the rise of prices I have already suggested in connection with the English figures for the same period. In France, however, the augmentation may partly be due to the more intimate connection which then took place between France and its neighbours on the different land frontiers, which must have been a powerful special cause, I believe, for the development of foreign trade among inter-continental countries.

To bring these figures to a point, it may be useful to look at a calculation per head of the population in each case:—

Imports and Exports per Head of the Population in England, France, and the United States compared.

	United Kingdom.			United States.			France.		
	£	s.	d.	£	s.	d.	£	s.	d.
<i>Imports—</i>									
1840	—			1	5	2	—		
'50	5	3	2*	1	10	9	1	5	—
'60	7	7	—	2	6	1	2	17	4
'70	9	14	4	2	8	—	3	15	8
'80	11	18	7	3	—	9	6	12	5
<i>Exports—</i>									
1840	1	18	9	1	11	1	—		
'50	2	11	10	1	6	2	1	3	11
'60	4	14	7	2	10	11	2	9	2
'70	6	7	11	2	6	11	3	—	6
'80	6	9	5	3	8	1	3	15	2

* Year 1854.

Thus our imports are still about four times per head those of the United States, and twice per head those of France, and our exports are about twice those of either country, not counting, what I must always insist on, our invisible exports. The increase of our imports per head since 1850 is also double the whole of the present imports per head into the United States, and about equal to the present imports per head into France, and the increase of our exports since the

same date is between 25 and 50 per cent. more than the total exports per head in either case.*

We may conclude, then, that not only has England made satisfactory progress in its foreign business under free trade, but the most prominent foreign countries have advanced less under protection. The onus of proof thus laid on the protectionist to show that we would have done better than we have done under protection, or that we shall do better in future with protection, appears to me overwhelming. There is no bearing up against it. Thus statistics, though they cannot logically prove the affirmative in the direct issue between free trade and protection, from the difficulty of finding exactly parallel cases and eliminating other causes, may be used to prove negatively that there is nothing in the apparent facts to help the protectionist. The presumptions are altogether against the latter.

VIII.—*SUBJECT CONTINUED: OTHER USES OF
IMPORT AND EXPORT STATISTICS. CON-
CLUSION.*

A *third* way in which statistics may be used in the argument is to show that protection does certain particular things which are obviously of an injurious tendency, while there is and can be no proof that the advantages of protection counterbalance these evils; and on the other hand that free trade effects certain ends which are obviously beneficial, which are *additive* to the welfare of a community, without any drawbacks. Facts of this nature corroborate the general theory of free trade, though they do not demonstrate com-

* For later figures as to English, French, and American foreign trade, I may refer to the Tables I laid before the Royal Commission on Trade Depression.

pletely and logically by themselves that the one *régime* is better than the other.

We may examine what a few of these facts are. Peoples adapt themselves quickly to any *régime*, and when a particular *régime* has been long established, it is difficult to see what its permanent effects are ; but when changes are made, the nature of the influence may be perceived, and it is from such transition periods we get evidence for or against the one *régime* or the other.

To go back a long way, let me refer you to a comparatively old book, Sir Henry Parnell's 'Financial Reform,' published in 1832. At pages 37-39 *et seq.* of the book, this author gives numerous instances of the effect of high duties in checking consumption—that is, in diverting trade and imposing various hardships on the community. He refers to tea, tobacco, wine, spirits, and other articles, in which an increase of taxes produced no more or little more revenue ; and I shall quote as a specimen what he says of flint and plate glass :—

“In 1813 the duties on flint and plate glass were doubled. In four years to 1813, the average annual quantity made for home consumption was 66,500 cwts. In the four years following 1813, the annual average quantity was only 30,000 cwts. The duties on all other kinds of glass were doubled in the same year. The revenue received in the four years preceding 1813 was, on an average, £340,000 ; that received in the three years following 1813 was, on an average, £395,000, so that the doubling of the duties, instead of producing £340,000, produced only £55,000.”

In the opposite sense Sir Henry Parnell then refers to numerous remissions of high duties which produced increase of revenue, and I shall again only mention the case of flint glass, in which a reduction of duty, in 1825, from 98s. to 56s.

per cwt., was followed by an increase of consumption from 30,000 to 47,000 cwts. annually. Sir Henry Parnell adds:—

“The Committee of Finance state, in their fourth report on the revenue and expenditure, that if the revenue had fallen off in the five years from 1825 to 1828 (*sic*) in the same proportion that taxes had been reduced, the diminution of it would have been 9 million pounds; but that, owing to increased consumption, it had only fallen off about one-third of that sum.”

No doubt Sir Henry Parnell is speaking of high taxes generally, but the greater includes the less, and high tariffs of a protective character must have exactly the same (or a worse) effect in diverting industry and diminishing consumption as high taxes of a non-protective character. It is the tendency of the system which is exhibited in such instances as those given by Sir Henry Parnell. The book I refer to is comparatively forgotten now-a-days, but it was famous once, and those who look into it will find it to deserve its reputation.

Another case of the effect of the large remission of duties at the period of transition, is supplied by the experience of what occurred in this country in the first two years after the introduction of the free trade tariff of 1842. Historically this experience had a great deal to do with the practically unanimous conversion of the country to free trade principles, but the striking nature of the facts statistically is still worth repeating. They are recorded for us in a little book of Mr. Gladstone's, not, I fear, very well known, entitled, ‘Remarks upon Recent Commercial Legislation,’ published in 1845.* It would be hopeless for me to attempt to give a condensed account of this book, to which I can but refer you; but among

* London : John Murray, 1845. Third edition.

the principal points I note, (1) that the calculated money loss of the reductions of the tariff in 1842–44 was £5,142,000, and that other duties were repealed or reduced, involving a money loss of £1,162,000, making together a sum of £6,304,000, and that the free surplus of the income tax over and above what was required to supply actual deficiency was only £2,621,000. This was all that was really required, as the event proved, to balance remissions of taxation amounting to £6,304,000 (pp. 12 and 13). (2) The mean estimated loss from remissions of duties on raw material mainly was £1,452,000, and the actual loss in the first year after the tariff Act was about this sum; but this first year was a year of great depression, and the actual loss in the second year was £1,133,000 only, showing a recovery in that year of £325,000 on a total of about 3 millions only (pp. 27 and 28). (3) The net loss of revenue from a great remission of the timber duties, while it was greater in the first year by £114,000 than Sir Robert Peel had estimated, was less in the second year than he had estimated by no less a sum than £193,000, showing a great recovery in the trade (pp. 36 and 37); and (4) the predictions of injury to our manufactures and other industries by exposing them to foreign competition—there was quite as much talk of foreign competition then as there is now—were ludicrously falsified in the case of cork-cutting, candle-making, vinegar-making, and other industries (pp. 49 *et seq.*). In all these matters a free trade tariff had apparently done what it was expected to do, and had contributed to swell the volume of national trade. As I have said, I am by no means condensing the volume, which is itself in a highly condensed form, but only pointing it out as a mine of information on the proposition that the change from a protective to a free trade *régime* appears to stimulate trade, from which we infer that the stimulus continues to

operate afterwards, though it becomes impossible, from change of circumstances, to compare in a strictly logical manner a free trading and a protectionist *régime*.

A third source of information, to which reference cannot be too often made, is Mr. Wells's valuable reports as commissioner of internal revenue in the United States. These are so well known that I may refer to them very briefly only. We hear a great deal of the growth of certain manufactures in the United States which have been protected, but these reports show clearly the reverse of the medal—the injury to other industries incidental to these changes. Thus the first report for 1866 dwells largely on the injury to the woollen manufacture by the protective tariff on wool designed to protect the growth of raw wool. Then in the report for 1869 we have many such statements as this about boots and shoes, viz., that the export value declined from 1,329,000 dollars in 1863 to 682,000 in 1867, and 475,000 dollars in 1869. Lastly, there is the well-known story of the decline in the American shipping trade, and the great increase in the amount of the foreign trade of the United States itself carried on in foreign ships. Mr. Wells gives a table at p. 30 of the report for 1867, showing even then the preponderance of foreign vessels in the carrying trade of the United States, and calculating the amount which the United States has to pay to foreigners in consequence, the opposite of the calculations I have submitted to you to-night as to what this country has to receive. These are all instances of loss arising through protectionist measures, and they should be remembered, as being undoubtedly in operation as a check to industry, though we cannot well see the effects from day to day, when a country has adapted itself to a protectionist *régime*. What they prove is, that protection does not add to the industry of a country, but that it only *diverts* the industry

at a great expense at the time and presumably at a continuous expense. The loss is certain and the gain entirely problematical, however much it may be proved that certain special industries have been fostered by protection.

As there are many later figures about American shipping since the date of Mr. Wells's report in 1869, and there is still a vague impression that it was the 'Alabama' which diverted shipping business from the United States, I may be allowed to notice briefly these later figures, and see how far the impression as to the 'Alabama' is confirmed. The first set of figures show the increasing preponderance of foreign vessels in the American carrying trade. For the years ended 30th June, 1871-80, we get the following figures:—

Table showing American Imports and Exports Carried in American and Foreign Vessels respectively.

[In millions of dollars.]

	Exports of Domestic Produce.	Imports.	Total.
<i>In American Vessels—</i>			
1871	181	163	344
'72	161	177	338
'73	163	174	337
'74	166	176	342
'75	145	158	303
'76	160	143	303
'77	156	151	307
'78	159	146	305
'79	122	144	266
'80	109	164	273
<i>In Foreign Vessels—</i>			
1871	376	363	739
'72	381	445	826
'73	478	472	950
'74	521	405	926
'75	493	382	877
'76	480	321	801
'77	515	329	844
'78	557	307	864
'79	588	310	898
'80	719	579	1,298

A table like this speaks for itself. While the amount of American trade carried in foreign vessels increases in ten years from 739 million to 1,298 million dollars, or more than 70 per cent., the amount carried in American diminishes from 344 to 273 million dollars. The American share, which is nearly half the foreign at the beginning of the period, is at the close just about a fifth of the foreign.

The second set of figures relates to American ship-building. I give the figures for twenty years, covering the whole of the 'Alabama' period. They are as follows:—

Tonnage of Vessels Annually Built in the United States in the Years
1860–80.

[In thousands of tons.]									
Year.				Thousand Tons.	Year.				Thousand Tons.
1860	..	..	..	213	1871	..	..	..	273
'61	..	..	..	233	'72	..	..	..	209
'62	..	..	..	175	'73	..	..	..	359
'63	..	..	..	310	'74	..	..	..	432
'64	..	..	..	415	'75	..	..	..	297
'65	..	..	..	383	'76	..	..	..	203
'66	..	..	..	336	'77	..	..	..	176
'67	..	..	..	303	'78	..	..	..	235
'68	..	..	..	285	'79	..	..	..	193
'69	..	..	..	275	'80	..	..	..	157
'70	..	..	..	276					

What this table shows, I think, is, that American ship-building did not fall off till after the war. From 1863, the third year of the war, down to and inclusive of 1871, the ship-building is larger than in 1860 and 1861, and not much short, I may state, of the figures in the previous decade, which was one of great prosperity in American shipping. As late again as 1873 and 1874 the building is considerable. I think we may infer from this that down to a very recent period even American ship-building and ship-owning had a sufficient basis for its development, if that development had not been checked by external causes. The effects of the

'Alabama' would in fact have been very speedily recovered from but for other causes. Probably, indeed, the operation of the civil war was not so unfavourable as it seemed. If ship-building for private individuals was checked, there was a great demand for Government ships, and miscellaneous vessels of all kinds, and at the close of the war there was nothing to prevent American ship-builders and ship-owners from recovering some of the ground they had lost. It may perhaps be doubted whether even with a free trade tariff in America the results would not have been the same as they have been. There were natural causes, I believe, operating in favour of the extension of the industry in British hands. But that the American tariff made impossible the extension of American ship-building, which would otherwise have been difficult only, is beyond doubt.

Last of all, coming to more recent times, the experience of the high tariff in Germany may be referred to as proving that those particular evils happen which free traders predict from such a tariff as Germany has established, viz., a high price of food, the deterioration of the position of the labourer, and a general *malaise*. On this head I need do no more than mention the well-known paper containing extracts from reports of the German Chambers of Commerce respecting the new tariff and its effects, lately presented to Parliament by the Board of Trade.* The reports summarised in that paper do not contain many figures, but the statements are distinctly quantitative, and when a sufficient time has elapsed we shall no doubt have the statistics.

Thus in many ways statistics can be used to show that the tendencies of free trade and protection are what they are said by free traders to be—the former *additive* to the material

* See C. 3111. Session 1882.

prosperity of a country, the latter *subtractive*, in some of their effects at least, so that no proof can be given of their being on balance beneficial. The quantity of evidence of this sort is overwhelming—I have only given a few instances. If we keep in mind the exact logical value of this evidence, it is destructive, I believe, of the protectionist case, as far as the appeal to statistics is concerned. In the absence of direct comparisons between free trade and protectionist *régimes*, which is a circumstance entirely against the protectionist, all the indirect evidence of tendencies exhibited at transition periods is in favour of the free trader.

A *fourth* way in which statistics may help in this controversy is by demonstrating the confusion of ideas which one always finds to be of the essence of a fair trade argument. The difficulty in dealing with these arguments is the difficulty of understanding them only, of trying to form a conception of what is in the mind of your opponent. We are told at one time that our foreign trade is falling off enormously, the alleged proof being that the exports of domestic produce have declined in value; while the obvious fact, apart from statistics, is the preponderance of English foreign trade in the business of the world, so that if the figures apparently showed the contrary, that would be no reason for arriving at a conclusion with which other facts would not fit in, but a reason only for studying and inquiring into the figures themselves, and seeing what they really meant, when properly rectified. We are told at another time that imports of manufactured articles into the United Kingdom are increasing, leading to the decay of manufacturing at home; the fact being, as distinguished from what some statistics may show or appear to show, that there never was more manufacturing than there is in England at the present time, of which the obvious proof is the rapid

increase of the population in recent years, and the fact that pauperism has been stationary or declining. If any statistics therefore appear to show the contrary, that is only a reason for studying the statistics with all the collateral aids possible, not for blindly rushing at a conclusion with which nothing else will agree. Similarly we have had the excess of imports in a country dealt with as a proof that the country is running into debt; the excess of exports of other countries used as a proof that they are prosperous, these countries being also assumed not only to be protectionist, but to owe their great exports to protection, and so forth; the real facts as to whether one country is running into debt and another gaining not being otherwise inquired into. The peculiarity of most such ideas is, that even if true they do not help the protectionist argument, which is of such a kind, as we have seen, that it cannot be helped by statistics; but the so-called arguments and statements are themselves misleading and unintelligible. Now one supreme use of the study of statistics, including import and export statistics, which is our special subject to-night, is to clear up all this confusion; to introduce true ideas where there are strictly no ideas at all—no picture of what is really going on in the world; and in this way to purge the mind of any tendencies to protectionist heresy. The mind capable of thinking about economic questions from a statistical point of view, and forming a true picture of the facts of the business world, would not, I maintain, be liable to the influence of protectionist ideas. It is not among leading business men in the City, or men conversant with great business affairs anywhere, with the single exception perhaps of Prince Bismarck, that you find these confused notions, which are the congenial soil of protectionist heresy.

How statistics help in these matters has already been set

forth, I hope, to some extent, by the discussion of the excess of imports controversy, and by reference to many special points. But a few more remarks may be permitted, to illustrate the extreme confusion of ideas which requires to be cleared up. To come back to the excess of imports controversy; even if the excess of imports meant what it is assumed to mean, it would not help the protectionist, but the real facts are wholly different from the apparent ones, and any true study of the subject gives quite a different idea of the business activity of England from the careless one. Our exports of British produce being nominally 223 million pounds, of which about 60 million pounds is raw material previously imported, the real export of the produce of British capital and labour shown in the so-called exports is thus about 160 million pounds only. We have found, however, on investigating the facts, that our unrecorded exports, in the shape of freights carried and other charges on the conveyance of goods, apart altogether from interest on investments abroad, amount to about 80 million pounds—about half the real amount of our recorded exports of British produce—so that without having some view of these unrecorded exports, we have no true idea of English trade. Without taking the unrecorded figures into account, we should err in our appreciation of the actual fact of England's business activity by 30 per cent. or more. It is not that the statistics—the figures themselves—are wrong. They merely require study and careful interpretation to get at the facts which underlie the statistics.

Another illustration of how the true study of statistics clears up false conceptions, is supplied by the confutation of many historical arguments which have recently been used by fair traders. Not long ago an evening journal of the very highest literary reputation, admitted into its columns a

series of letters comparing the relative progress of English trade at different dates during the last two centuries, in which not the slightest reference was made to the fact that we have no good statistics of aggregate imports before 1854, and no declared values of exports before 1820, so that all comparisons before these dates, or between facts before and facts after these dates, are most difficult. The true study of statistics of course shows the necessary limitations of any such comparisons. I do not say it would be quite impossible to go back farther to some good purpose. It is quite likely that a careful student, with a good record of prices in his hand, willing to take the trouble to compare this record with the official valuations from time to time, and to attend to the relative magnitude of the chief articles of trade, might arrive at results which would throw a great deal of light on the economic history of the last two centuries. But for the present the confused notion that our recent progress under free trade has been less than in former periods before free trade, which was the conclusion or apparent conclusion of the remarkable letters I have referred to, must be dismissed as a mere wild notion which cannot be shown to have any relation to actual facts. The range of our genuine knowledge in these matters is much more limited than such discussions assume.

Another illustration of how true ideas may be substituted for false, is supplied by the discussion in Sir T. Farrer's recent pamphlet issued by the Cobden Club, on "Free Trade *v.* Fair Trade." A great deal of this pamphlet is taken up with the refutation of the idea that our trade with the colonies is specially beneficial, or tends to increase more than our trade with foreign countries. For myself, I cannot see how the idea which Sir T. Farrer refutes tends to support the protectionist argument. It rather seems to prove that as the

colonies are less protectionist than foreign countries, their relative free trade is only a sign that if they were more free trading the better for us. But Sir T. Farrer's demonstration that there are "colonies," and "colonies," and that there have been great fluctuations in the amount of trade and its proportion to our whole trade which we have done with them in different periods, is conclusive as to there being nothing in the protectionist notion of the special value of colonial trade. Perhaps I may add that a reference to one of the tables which I have given to you to-night, viz., that showing the issues of public loans and companies on the London Stock Exchange on foreign account in the last six years, throws some light on the momentarily greater development of our trade with the colonies as compared with our trade with foreign countries. This list comprises a very large proportion of colonial issues, a much larger proportion than the previous six years, before the foreign loans' collapse, would have shown. The truth is, I should say, our exports to the colonies lately have kept on increasing because their credit was never impaired, while our exports to many foreign countries fell off because we ceased to lend to them. At any rate the point seems worth investigating before drawing absolute conclusions.

Yet one more remark on this head. Sir T. Farrer shows conclusively enough that colonies are of different sorts, and they are not to be grouped together, nor are all foreign countries to be grouped together. This reminds me of a different grouping of countries, which some of you may remember, by a gentleman, Mr. Ernest Seyd, who was one of us, and for whom we all had the highest respect, though few of us agreed with his conclusions or methods. Mr. Seyd grouped countries into those having the gold standard, and those having the silver standard, and found, or believed he

had found, that it was with countries having the gold standard our trade had progressed most, while with countries having the silver standard it had tended to decline. I do not know whether if Mr. Seyd had lived and observed the very latest advance in the trade with India he would have adhered to his view, but his division was at least quite as logical as the division into colonies and foreign countries which has lately been made.

The conclusion is that such rough groupings and the facts apparently shown are not to be relied upon, and do not yield true ideas in a statistical view. The inquirer in this as in other matters must try many methods, and must not conclude that the apparent look of the figures corresponds to facts. A true history of the recent course of the foreign trade of the principal nations of the world, would lay stress upon many things besides the division of nations into British colonies and foreign countries, or into gold standard and silver standard countries. The progress of invention; the growth of shipping in one country, and its decline in another; the settlement of new countries, and the like facts, would all have a place, and perhaps a larger place, than the points which protectionists and fair traders, or enthusiasts like Mr. Seyd, who concentrate their attention on one subject only, take up. I need not, however, multiply illustrations, especially as the whole course of the argument to-night has been to substitute, as I hope, true ideas for false ones, on many points.

In various ways, then, we conclude that a use can be made of statistics of imports and exports in the discussion between free traders and protectionists. The fact that such statistics cannot be used in the direct argument as to which *régime* is most favourable to material progress, is against the protectionist, who calls for Government interference, and must thus

prove his case, while the free trader is passive. The statistics at the same time supply ample proof *primâ facie* that there is nothing in the apparent figures of imports and exports to supply a case against free trade. Next, they can also be used to prove that at the period of transition from one *régime* to another, the tendency of free trade measures is to add to the prosperity of a country, while no such tendency can be proved of protectionist measures. Finally, they help to prove the utter confusion of ideas which is found to be the most fitting soil for the growth of the protectionist idea itself. Without then making more of statistics than can really be made of them, we can affirm that they are most useful in these controversies. They are, however, useful in proportion only as we observe their necessary limitations. If the example of protectionists is imitated by free traders, and the first figures that come to hand are shied at opponents on the principle that any stick is good enough to beat a dog with, I am not sure that figures will help the free trader much. The public will simply be puzzled, and induced more than ever to believe that there is nothing at all in statistics.

IX.—CONCLUSION.

I HAVE now to return to the point from which I started. My complaint at the beginning was of the wrong use of statistics, and the neglect of the conditions upon which alone they can be rightly used. If I have made out a case at all, it is that even import and export figures, which are so familiar to many, cannot be handled with facility; that there is a world of knowledge to be learnt concerning them; and that in all directions sound and diligent study must precede

any good use of them; but that if there is such a study of statistics, useful and valuable conclusions can be arrived at with certainty. My suggestion, then, would be that there is need, not only for the members of this Society to redouble their exertions in the way of diffusing a knowledge of statistical methods, but for some improvements in our system of education, in which there is hardly any visible place given to statistics. There are many chairs of political economy in this country, but no chair of statistics that I know of, and very few, if any, of the political economy chairs, where the teaching of statistics forms part of the course. Some remedy surely ought to be applied to this defect. As regards political economy, it is quite certain that any study of that science in its applications is impossible without statistics. A theoretical teacher may trace out tendencies or forces on paper, but in the real world quantities must be dealt with; and in the measurement of tendencies or forces statistics are absolutely needed. It is easy to prove theoretically, for instance, that a protectionist tariff does harm, but it is a different thing in the real world to give any notion of how much harm is done, and when the protection is slight in proportion to the whole business of a country to measure the effect at all. How to deal with such questions is the problem for the economist who is also a statistician, and they are much more difficult and complex than those belonging to theoretical or deductive political economy. The time has come then, it seems to me, when the public have a right to expect that in our universities statistics should have some recognised place as well as political economy. If the facts of the business world, as it is constituted at present, were taught statistically, and some notion given of the sources of information and of how they could be rightly used, much of the recent discussion between free traders and protectionists would probably have been

saved: most educated men would have seen at once when propositions were stated which were incapable of statistical proof, and when figures were used without any study or appreciation of the facts underlying them. The protectionist or fair trader would have been summarily laughed out of court, instead of being supposed for a time to have had so much of a case that party politicians on one side thought fit to give him some encouragement, and party politicians on the other side were a little apprehensive of the result. The study of statistics should undoubtedly form a necessary part of liberal education, especially of those who aspire to be politicians or public men. [1882]

VII.

FOREIGN MANUFACTURES AND ENGLISH TRADE.*

I.—INTRODUCTORY.

THE progress of invention and industry creates a state of things throughout the world, in which, as I believe, an increase of manufacturing in foreign countries must inevitably take place. The wants of men increasing with their resources, the proportion of people engaged in agriculture and mining and analogous pursuits, in almost every country, is destined to decline, and that of people engaged in miscellaneous industry—in other words, in manufactures, using the latter phrase in a wide sense—to increase. The question I now propose to discuss is whether such an increase of industry in foreign countries takes place under conditions which are on balance favourable or unfavourable to English trade? I believe the answer must be given that the conditions are favourable, and I have so little doubt of the answer, that

* This Essay was first published in the beginning of 1835, in the form of letters to the 'Times,' the occasion being a reference to alleged opinions of mine which was made by Lord Dunraven in the course of a fair trade debate, in the House of Lords in November 1834. The passage in my previous writing which Lord Dunraven misunderstood, will be found in the Essay on "The Liquidations of 1873-76," included in the first series of "Essays in Finance."

when I first suggested it I hardly anticipated its being questioned. The opinion, however, has been a "hard saying" to many, who have some vague notion apparently that no country should manufacture but England, and that to suggest an increase of manufacturing abroad as being possibly the result of conditions which are good and not bad for English trade, is something wicked and monstrous. To speak of foreign manufactures is to hold up to such people the proverbial red rag. But the question, like others in business, must of course be looked at hardly and dispassionately. We must not ignore facts.

Now, as to the inevitability of the process is there any reasonable doubt? In England, at least, we are familiar with the fact that for generations the rural population has steadily declined, although the quantity of food produced, allowing for changes in quality, is as great or greater than ever. Similarly, in France there has been a decrease of the rural population and a growth of the population in towns. Even in the United States, notwithstanding the special condition of a vast quantity of virgin soil in that country, the proportion of the town population for the last two censuses has tended to increase.* The relative diminution of the population engaged in agriculture—and similar facts could be stated as to agriculture and mining together—is thus a fact of the present time among great civilised communities, whether we like it or not. That it is a good thing for the human race is, however, equally certain from the economic point of view. Fewer people in proportion being needed to produce food, there are more people in proportion to engage in other industries. The whole production of an industrial community is consequently increased. If the food

* See *postea*, p. 340.

of a community could be produced by a tenth instead of by a fifth, or a larger proportion of the whole number, the other things desired by human beings would be increased by the labour of so many more hands.

In point of fact, the increase of wealth in modern times is probably greater than what is indicated by the mere decline in the proportion of the agricultural population. The whole populations in question are better fed than they formerly were, instead of being fed as well. The relatively diminished agricultural population is thus producing more than it would appear to be doing from a mere comparison of the changes in its numbers on the assumption that the whole population supplied by it is living no better than it did.

Of course it may be said that although the proportion of the rural population tends to diminish, it does not follow that the relative increase of manufacturing population or of population engaged in other industries should be an increase of such population abroad. It seems to be considered that the only tolerable condition of things would be an increase of the English manufacturing population. This would mean, however, an inconceivable increase of the town population of England, which has already increased in a most marvellous manner. If manufacturing were to increase in no country but England, then the population of foreign cities like Paris, Rouen, Liège, Boston, Chicago, and many more cities must largely have come to England, involving a displacement of population without example in history. Miscellaneous industries, however, must in the nature of things be local. Dress-making and tailoring, for instance; house building, and to some extent furniture making; railway and road making, and other industries—must all in the nature of things be local, so that an agricultural population necessarily attracts a miscellaneous population. So much being local, even industries which are

specifically known as manufactures, as they are on so large a scale as to be in factories, tend to be local too. It is thus quite inconceivable that a relative diminution of the rural population of any country should lead to an export of population to a single country which is to do all the manufacturing. Apart from obstacles of a non-economic kind to such a transfer of population, we must expect, on economic grounds alone, that the tendencies favouring the relative diminution of rural population generally should lead to a relative diminution in each particular foreign country—*i.e.*, to a relative increase in the non-agricultural population of that country, including the population engaged in “manufactures.”

So much for the inevitability of the condition that foreign manufactures should increase. Coming to the question as to whether England gains or not, the same answer must be given both theoretically and practically.

Theoretically, we have to consider different cases. In the first case of all there can be no doubt. Suppose a community, with its rural population relatively diminishing, should employ its surplus hands in “manufactures” which compete in no way with English manufactures. England’s gain would clearly be that in such a foreign community it has a richer customer than before. Some of the “manufactures” might be exported to England, but the object would be to purchase other manufactures of English make. Or some of the manufactures might be exported to foreign countries with which we trade, and the proceeds of the sale would be employed in purchasing English manufactures. On the hypothesis made, English trade could in no way suffer injury.

In the second case, suppose a foreign community with a rural population relatively diminishing should employ its surplus hands in making for itself articles which it has hitherto purchased from England. In this case England, at

first sight, appears to be damnified; and the particular English manufacturers who lose their market would say it is wholly damnified. But the injury is only at first sight, and there would obviously be modifications and compensations. By the hypothesis the goods hitherto exported to purchase English manufactures would continue to be available for export. The particular English manufactures hitherto bought would no longer be bought, but the surplus would be used to buy something else either in England or elsewhere; and if not in England, then the country from which additional purchases were made would, in turn, have a surplus, so that in the end the demand would tend to come upon England as the predominant manufacturing country. Follow the matter out as we may, the original demand of the country which now manufactures something it formerly bought from England would be found to remain in the world's markets; and, as I contend, would in the long run benefit England. Meanwhile the exact loss to England of the cessation of the original direct demand must not be exaggerated. At the worst there would only be a displacement of manufacture—not a matter to be much considered, as these changes in the course of trade are always slow; but there need not even be displacement in actual fact, a change of demand from one country being often and usually accompanied by compensating changes in the demand from other quarters.

At the worst, suppose there should be no compensating demand from abroad, which is inconceivable, the *maximum* loss to England would be the extra profit on the particular foreign trade which in any given case is displaced and forced into some other trade, as compared with the profit in that other trade. Such a loss must, of course, be quite inconsiderable in the general question of the losses and gains of so vast a trade as that of England.

In the third case, suppose a foreign community with its rural population relatively diminishing should employ its surplus hands in making articles for sale in England which compete with English manufactures at home—the case most dreaded of all, apparently, by fair-traders. Clearly in this case the only effect of the foreign demand would be stimulating. English consumers would be benefited by a cheaper commodity, just as they would be by competition springing up at home. A certain part of the capital and labour engaged in home manufacturing might be gradually displaced ; but there would be no displacement if the home demand simultaneously increased, and there would be no diminution of employment in the aggregate, as the foreigner selling articles here which he did not sell before, must buy equivalent articles in return.

A fourth case would be where the new manufactures of a foreign country competed with English manufactures in the markets of a third foreign country. Here the results would in no wise be different from those given in the second illustration. For present purposes, all foreign countries together may be regarded as one foreign country.

Of course, in actual fact, as foreign manufacturing increases, the above cases are mixed. To some extent, as their rural population relatively diminishes, foreign countries engage in new manufactures, in which case all they do is pure gain to others as well as to themselves ; to some extent they begin to make for themselves what they have hitherto bought from England, in which case it is English capital and labour which is set free for new undertakings, the wealth of the foreign community in question and its demand on the markets of the world generally being all the while increased ; and finally foreign countries, to some extent, compete with English manufactures at home or abroad, with results, however,

necessarily much the same as in the second case, and with the full advantage to the English consumer of cheapening the commodities he consumes.

Thus in no way, in any theoretical case, is it the tendency of the relative diminution of rural population in foreign countries to injure English trade. At the same time, as it is implied in the hypothesis that the wealth and purchasing power of foreign countries and their wants also increase, then there is a general condition favourable to English trade produced. England as a manufacturing country *par excellence* can only gain by the increased purchasing power of others, and the creation among them of innumerable wants. Just as at home the prosperity of Liverpool is no bar to the prosperity of Newcastle, so the prosperity of Paris need be no bar to the prosperity of London. There is one special industry, shipping, which must obviously gain by the increased wealth of foreign countries and the increased movement of foreign industry generally; and so interdependent are the various kinds of manufacturing that, in the nature of things, there must be numerous other English industries in a like position.

The practical proof that the condition of things described is not unfavourable to English trade is to be found in the history of the present century. During all that time, foreign manufacturing and foreign competition have been constantly increasing. Our own unfortunate protectionist policy before 1843, while impoverishing ourselves, tended to stimulate manufacturing abroad in a way which deprived us of the benefit we should have had from an increase of foreign manufacturing under natural conditions; but apart from that special stimulus, the natural conditions have obviously caused a large increase in foreign manufacturing. But all the while there has been no such increase of manufacturing

or of exports of "manufactures" per head of the population as there has been in England; and this relative growth has continued unchanged to the present day.

Theory and practice are thus at one as to the benefit which English trade derives from the general conditions of industry under which foreign manufactures increase. The practice is so important, and the facts are so interesting and instructive, that it will be my principal object in the remainder of this essay to examine them.

II.—ENGLAND'S RELATIVE PROSPERITY.

HAS England prospered while the miscellaneous industry of foreign countries has been increasing? Has it prospered as much as or more than other great nations? Have the changes of the course of trade which have occurred been accompanied by indications that what England loses, or appears to lose, in one direction is made up by a gain in another direction?

These questions must all be answered in the affirmative. As to English prosperity until now, looking at the matter broadly, there can surely be no question. As the matter indeed, has been thrashed out again and again, I need only indicate in the briefest manner, the outline of the argument. The very increase of population is a proof of prosperity. From 16 millions at the beginning of the century we have grown to be a people of 36 millions. Leaving Ireland out of account, as having existed under special conditions, we have grown in Great Britain in the same period from $10\frac{3}{4}$ millions to 31 millions. In about eighty years the population has trebled. Population, as a rule, would not increase without an increase of the means of subsistence. In the very increase of popula-

tion for many years past, therefore, that increase having been one of people engaged in miscellaneous industry, we have a proof that the conditions of trade throughout the world, which involve a large increase of miscellaneous industry elsewhere than in England, have not on the whole been unfavourable to us. We might have been more prosperous under some ideal conditions; but have we not been fairly prosperous?

In point of fact, there has not only been an increase of population, an enormous increase, but this increased population exists in greater average comfort than any smaller population existing at any former period on British soil. I may refer to my address in 1883 * to the Statistical Society as containing the substance of what I should have to say on this subject. In increased money wages, in cheaper food and clothing, in larger command over the luxuries of life, the masses of the United Kingdom, besides having become far more numerous than they were, have made an enormous advance upon their condition half a century ago. There is still a large criminal and pauper population in our midst, and there is still a large mass of the very poor just above the borders of pauperism; but the proportions of both these classes to the whole community are smaller than they ever were before.

Having discussed the subject so recently, and as I am only giving an outline of the argument, it would be out of place for me to enter now into more detailed proof; but I may be allowed a remark on the kind of contradiction that is sometimes given to such statements. A certain class of humanitarians and socialists assume constantly that the poor are increasing, and that the "masses" are worse off than

* November, 1883. "The Progress of the Working Classes in the last Half-century." This address is included in the present series. See p. 365, *postea*. See also "Further Notes," p. 409.

ever. At a time of depression like the present every instance of diminution of employment in a particular trade is pointed to as if it were part of a general stoppage of industry that had begun, without any attention to the fact of the well-known oscillations to which industry is subject, or the still more important fact that, calamitous as they still are, the oscillations in recent times are less than they used to be, and less calamitous on the whole in their effects on the working classes. But, because certain people will not look at the facts, the facts themselves are none the less certain. The numbers of paupers and amounts paid for poor relief have for many years been carefully ascertained; various records of money wages also exist; the prices of principal articles, such as wheat and sugar, are also exactly known; the increase or decrease of different classes of people, the average consumption of leading articles of luxury and necessity, the rate of mortality of the population for several generations, are things that are also well-known or ascertainable; so that there can be no real doubt of the broad conclusion to which all the facts point. If there is any deterioration of the people of England from a height of prosperity arrived at in any previous period, we must be only at the very beginning of it. There is no deterioration which has yet had any effect on the statistical signs that would disclose it.

The question then arises—Is there any other large community which has made greater progress? The only one which can be referred to is, of course, the United States. In the United States, however, there is no similarity in the conditions to those of England, everything being altered there by the vast abundance of new and fertile land. The increase of population in the United States, in consequence of that abundant new land, has been much larger than it has been in England. There has been equally remarkable progress in

our Australian colonies. But take the old countries. In European countries the increase of population has been in no case at a greater rate than in Great Britain. In France, which is most like England in many conditions, the growth has been very slow indeed. In Denmark, Norway, Sweden, Holland, Belgium, Spain, and Portugal the increase on the whole has also been slower than in England. In Austria-Hungary the increase has been very slow, though rather more than in France. In Italy, Germany, and Russia there has been an increase more resembling that of England. In Russia, however, this arises from the conditions having more resembled those of the United States than those of England, a vast expanse of virgin soil having been available for the population. In Germany, and even more markedly in Italy, it seems a little doubtful whether the increase of population has been so largely accompanied as it has been in England by an increase of comfort, and most certainly the progress has not been greater than in England. With the single and doubtful exceptions of Germany and Italy, however, it may be broadly stated that the increase of a population like that of England, without virgin soil to expand upon, is absolutely unique in history. No old country has progressed in a similar manner.

On the broadest grounds, therefore, there is reason for affirming that the conditions of trade throughout the world for many years past have been consistent with a wonderful degree of prosperity in England. Not only have we prospered absolutely, but a comparison with other countries under similar conditions proves that we have prospered relatively. We have done well, and, as things go, we could not have done better. Under some ideal conditions we might, perhaps, have done better, but in a practical discussion we can only take things as they are.

The proof might stop at this point. So long as we are prosperous, it cannot matter very much how the prosperity arises. Whether it is home or foreign trade that is the cause of prosperity is all one, so long as the general result is satisfactory. In a comparison with other nations, however, especial importance appears to be attached to the foreign trade. That trade is sometimes spoken of as if it were all the trade of the countries referred to. But, tried by the test of the foreign trade only, the results are equally favourable to England. In no country in the world has the foreign trade progressed so much.

The figures are sometimes disputed, but they are really beyond dispute. At the present moment the foreign trade of England—imports and exports together, including the transit trade—is in round figures £750,000,000 per annum, about £20 per head of the population. In France the corresponding figures are £429,000,000 and £12 per head; in the United States, £306,000,000 and £6 per head; in Germany, £488,000,000 and £11 per head; in Russia, £160,000,000 and £1 10s. per head; in Austria-Hungary, £143,000,000 and £3 10s. per head; in Italy, £100,000,000 and £3 10s. per head; and so of other nations. It might be possible to find out some one small country, such as Belgium, where the total per head is more than in the United Kingdom; but in the absolute amount of the foreign trade, and in the amount per head among all the important nations of the world, we are without a rival. There is hardly a nation which comes so near us that it can be said to occupy a second place where we occupy the first.

The parallel does not end here. The above figures take no account of shipping, an important element in the foreign trade. Here the comparison is notoriously still more favourable to England. Out of 11½ million tons of ocean-going

sailing tonnage belonging to the different nations of the world, in the latest year available for comparison, no fewer than $3\frac{1}{2}$ million tons, or 30 per cent., are English; out of $4\frac{3}{4}$ million tons of steam tonnage, the more important branch of the business, no fewer than $3\frac{1}{2}$ million tons, or over 70 per cent., are English. (I speak here of the United Kingdom only, and compare it with the rest of the world, including British possessions.) To put the matter another way, England has 100,000 tons of ocean-going steam shipping for every million of the population; the United States 3,000 tons only; France 11,000 tons only; Germany 7,000 tons only; and so of other nations.

Thus, whether we take foreign trade in the limited sense of imports and exports only, or whether we include shipping, the predominance of England at the present time is beyond all question. Unless we are very slack indeed, it must take many years before any other nation can come up to us in absolute amounts, and still longer before they can approach us in the amounts per head.

The same conclusion is arrived at when progress in recent years is considered. Not only is England predominant now, but nowhere has such progress been made. Having dealt with the subject at some length in a paper I read in 1882 to the Statistical Society,* I may be allowed to refer to that paper, only stating here some of the salient points. Thus in England, as regards imports, going back as far as we can, which is to 1854 only, we find that since that date there has been an increase from £143,500,000 to £411,000,000, or very nearly 200 per cent., the amount of the increase being £268,000,000. In the United States the imports are found to be still little more now than they were in England

* See *supra*, pp. 132-239.

in 1854, being only £152,000,000, and the increase from 1850 has been £116,000,000 only, against an increase of £268,000,000 in England in the same period. If we were to go back for a shorter period of years we should still find the amount of the increase in a given period larger in England than in the United States. Similarly comparing France with England, it is found that in 1880 the imports in France are far below those of England, being £245,000,000 only, as compared with £411,000,000, while the increase since 1850 has been £200,000,000 only, as compared with £268,000,000 in England since 1854. Unfortunately the German foreign trade statistics do not begin till 1872, but it appears that the total of German imports is about £240,000,000 only, as compared with the much larger figure in England, while the increase in ten years has been about £20,000,000 only, as compared with about £60,000,000 in the United Kingdom in the last ten years. It would be useless to follow out the comparison with other countries whose foreign trade is still smaller than that of England. Nowhere is there an increase in amount to be compared with our own.

It is the same with the exports. The increase in the case of England of the exports of domestic produce since 1840 has been from about £50,000,000 to £240,000,000, an increase of £190,000,000; in the United States in the same period it has been from about £26,000,000 to £170,000,000 (the exports of the United States were actually £20,000,000 less in 1883), or £144,000,000—the total exports of the United States at the present time being thus less than the increase in the exports from England since 1840; in France in the same period the increase is from £43,000,000 to £140,000,000, or about £100,000,000; and so of other nations. In amount of increase there is no nation to be compared with England. As regards Germany, where we can only go back to 1872,

the amount of the domestic exports is still only about £160,000,000 per annum, or less than the total increase in the United Kingdom in the last forty years. If the German figures are to be relied on, an exceptionally large increase would seem to have occurred since 1872, but the whole system of recording the foreign trade in Germany is perhaps as yet too novel to make comparison for so short a period altogether trustworthy.*

Then, in regard to shipping, English progress has been even more remarkable. Forty years ago, according to the best estimate I can make, we were owners of about one-third only of the world's ocean-going shipping. Now we own practically more than half, and of steamers alone we own 70 per cent.

The figures being thus quite clear, the wonder is they are disputed. It may be interesting, therefore, to explain how they may be manipulated so as to present an appearance of some foreign countries gaining upon us. The manipulation depends entirely upon the use of percentages. The increase in United States exports since 1840, although £144,000,000 only, as compared with an increase of £190,000,000 in England, shows an increase of over 500 per cent., as compared with 380 per cent. in England. See, it is said, how much faster the United States is moving than England. All the other circumstances—our greater increase in amount, the enormously greater magnitude of our actual trade, the much greater increase of population in the United States—are overlooked. But to act in this way is necessarily to blunder statistically, where the consideration of amounts as well as percentages is always material. Tried by the suggested test of percentage of increase only, it would probably be found that no country has progressed so much in recent

* See my evidence before the Royal Commission on Trade Depression for a farther discussion of the figures of German exports.

years in its foreign trade as some parts of Western Africa. The increase from zero, or all but zero, to an appreciable amount of trade makes an enormous change in the percentage; but no one would say that the increase of the foreign trade of Western Africa is to be compared with such increases of trade as those we have just been dealing with.

The best method of comparison, perhaps, is to take the amounts per head of the trade at different times, and by this method the predominance of England stands out in the clearest manner. I extract the following table and my comments on it from the above essay:—

IMPORTS AND EXPORTS PER HEAD OF THE POPULATION IN ENGLAND,
FRANCE, AND THE UNITED STATES COMPARED.

	United Kingdom.			United States.			France.		
Imports:—	£	s.	d.	£	s.	d.	£	s.	d.
1840.. .. .	..	..	..	1	5	2	..	..	..
1850.. .. .	5	3	2*	1	10	9	1	5	0
1860.. .. .	7	7	0	2	6	1	2	17	4
1870.. .. .	9	14	4	2	8	0	3	15	8
1880.. .. .	11	18	7	3	0	9	6	12	5
Exports:—									
1840.. .. .	1	18	9	1	11	1	..	..	..
1850.. .. .	2	11	10	1	6	2	1	3	11
1860.. .. .	4	14	7	2	10	11	2	9	2
1870.. .. .	6	7	11	2	6	11	3	0	6
1880.. .. .	6	9	5	3	8	1	3	15	2

* Year 1854.

“Thus our imports per head are still about four times those of the United States and twice those of France, and our exports are about twice those of either country, not counting, what I must always insist on, our invisible exports. The increase of our imports per head since 1850 is also double the whole of the present imports per head into the United States, and about equal to the present imports per

head into France, and the increase of our exports since the same date is between 25 and 50 per cent. more than the total exports per head in either case."

Since the above was written the changes in the imports and exports would make no substantial difference in the result: but the difference would be to the advantage of England.

The case for the prosperity of England under the condition of an increase of the miscellaneous industry of foreign countries is thus strengthened as we advance. Not only does our prosperity, when we look at the question most generally, appear greater than that of any foreign country, but when we look specially at the foreign trade which is most dwelt upon and considered by those who harp upon foreign competition, we find that up to the present time no country has advanced as we have done. All that can be said to the contrary is that, in some countries having small beginnings, the rate of advance has been greater for a certain period than with us. But the magnitude of the rate is clearly connected with the smallness of the beginning. There is no reason to believe that the rate of advance, when the actual amounts have become larger, will continue what it has been. As yet the advance per head is much greater in England than elsewhere.

III.—OUR SPECIAL GAIN FROM FOREIGN MANUFACTURING.

THE precise character of our prosperity is not so material as the prosperity itself, and the fact of advance in our foreign trade, if an increase of foreign trade is the kind of prosperity

desired, is of course satisfactory, whatever may have been the course of events as regards particular parts of that trade. As indicated, however, in the questions with which I began the previous part of this essay, our foreign trade may be looked at more minutely than I have yet looked at it for indications as to the way it has been, in fact, affected by that increase of miscellaneous industry which is in question. Does the increase of that miscellaneous industry appear to affect our foreign trade unfavourably, or are there any signs that our own improvement is largely dependent on, and connected with, the improvement abroad?

Up to a certain point there will be no doubt of the answer. The material increase of our foreign trade for many years past has been, as regards our exports, an increase in the manufacture and export of "other things," such as I have indicated as likely to arise along with the increase of manufacturing in foreign countries. My contention has been that whether foreign countries, as their manufacturing population increased, took to manufactures of an entirely new kind, or took to making articles which they had hitherto bought from England, or took to making articles which were sent to England or elsewhere for sale in competition with English manufactures, the result would be a demand on England for "something else." This phrase, like others I have used in the controversy, has been objected to as hard, and I have been called on to point out the "something else." But the answer is in the history itself. While our foreign trade has been increasing, as we have seen, to a degree and amount without example elsewhere, the increase has mainly been in "something else." I have before me at this moment a table showing the percentage of the principal enumerated articles of our exports to the total exports at different dates since 1840. What has happened is most instructive. Our cotton

manufactures, for instance, in 1840, formed about 33 per cent. of our total exports; about 1850 they formed rather less than 30 per cent.; in 1861 they were still rather under 30 per cent.; in 1870 the proportion had fallen to $27\frac{1}{2}$ per cent.; in 1880 it was about $25\frac{1}{2}$ per cent. only; and in 1883 it was under 24 per cent. Linen and jute manufactures, again, which were about 6 per cent. of our exports in 1840, were only about 3 per cent. of our exports in 1883; woollen and worsted manufactures, which were about 10 per cent. of our exports in 1840, were only about 7 per cent. of our exports in 1883. In all these cases of staple manufactures, though the amounts have largely increased (for we exported £51,000,000 only in 1840 against £240,000,000 at the present time, so that a smaller percentage of the total gives a larger amount now than a larger percentage of a smaller total did in 1840), yet the rate of increase has been slower than in the case of our exports generally. In other words, the direction of trade has shifted a little. It is the "something else" which foreign countries have been buying more largely from us. There is very little sign indeed of any actual diminution in their purchases of staple articles from us such as we formerly sold abroad; what we are dealing with is a greater proportionate increase of their purchases of "something else." Still it is the "something else" which bulks more and more largely in our foreign exports.

To some extent also it is possible to show what the new demands upon us have been. In 1840, for instance, our exports of coal were about 1 per cent. only of our total exports. In 1850 they were approaching 2 per cent.; in 1861 they were nearly 3 per cent.; in 1870 about the same; and finally, in 1883, rather over 4 per cent.—an ever-increasing percentage of a larger volume of trade. Our exports of iron, again, in its different forms, exclusive of steam

engines and machinery, constituted in 1840 only about 3 per cent. of our foreign exports; in 1883 all but 12 per cent. Machinery, which was hardly known as an export in 1840, the wisdom of our legislators who then endeavoured to protect trade prohibiting almost altogether the export of machinery, has now grown to be $5\frac{1}{2}$ per cent. of our total exports.* Even more remarkable, however, has been the increase of that miscellaneous trade which can hardly be classified at all. Anyone who looks at the Statistical Abstract will find that, in spite of constant endeavours to keep down the item of "other articles" which remains after all the principal articles are enumerated, the bulk of this miscellaneous item is always increasing. In the last abstract issued it will be found that the "other articles" in 1869, at the beginning of the fifteen years' period embraced in it, amounted to £9,000,000, or not quite 5 per cent. of the total exports at that date, amounting to £190,000,000. In 1883, the "other articles" amounted to £22,000,000, or nearly 10 per cent. of a total export of £240,000,000.

The remarkable increase of our foreign trade during the last forty years is thus mainly due in fact to an increase of the "something else" in that trade which theory would lead us to expect if miscellaneous industry abroad increases, but which it is impossible beforehand for any one to point out specifically. It may be argued, of course, that our trade would have been greater than it has been if foreign nations had consented to be hewers of wood and drawers of water for us; had been content to use their ever-increasing population at whatever cost in the old ways; and had bought ever-increasing quantities of the products of the previously existing English manufactures which they had been in the

* For details of these figures, see my last report to the Board of Trade on the Prices of Imports and Exports, C. 4456. Sess. 1885, p. 8.

habit of purchasing. But, of course, there can be no actual proof of such an argument, which appears, moreover, to be exceedingly dubious in itself, as we do not know that foreign nations would have bought increasingly from us at all, unless they had become richer, and had taken more largely to manufacturing for themselves. Still, as the increase of foreign manufacturing was inevitable, we need surely concern ourselves very little with what might, could, would, or should have been, and content ourselves with the fact that the actual development of our foreign trade has been in itself satisfactory in amount, and has been of the kind we may expect if foreign manufactures increase—that is, a development of our own miscellaneous manufactures. It is the “something else” which has grown and which will probably continue to grow.

In passing, it may be remarked, that lament will probably be made by those who desire to see trade protected, who think they can do better for people than they can do for themselves, over some parts of the increase of our exports above referred to. In exporting coal we shall be told that we are exporting our capital; in exporting machinery, that we are exporting the very instruments of foreign competition with us in every market of the world and at home. While, however, the immediate result is satisfactory enough in an economic view, it would not be easy to show, on economic grounds, that a country like England would find it to its interest to seal up its coal or prevent the export of machinery. Not only by so doing should we stop present trade, but we do not know whether the particular acts of interference would have the effects proposed, while there is every likelihood of the interference producing worse evils than any we apprehend. Suppose the export of coal restricted, would not the main consequence probably be a development of coal mining in foreign

countries? The same with machinery. Foreign countries being in a condition generally which fits them to engage in manufactures, if we prevent them from getting the requisite machinery here, then, instead of coming to us for the other manufactures which we would like them to buy, and which we desire to prevent them making for themselves, are they not much more likely than if they are let alone to engage in the business of machinery-making on their own account? The drawback to the increase of our foreign trade in the fact that it is partly an increase of the exports of coal and machinery is thus not so serious as it appears. Anyhow, it is impossible to show that under any ideal conditions we should have done better. We can only take the facts of our actual trade, and what we find is an increase in every way satisfactory in amount, which is precisely of the kind that would have occurred coincident with the increase of miscellaneous industry abroad, while we do not know that there would have been any such increase in amount of another kind if miscellaneous industry abroad had not increased.

It is possible, indeed, to go a little further. The exports of coal and machinery, as well as of iron and iron manufactures generally, are obviously connected very closely with the increase of miscellaneous industry abroad. Coal is exported, for instance, to be used in steam navigation; to be used, indeed, very largely, in our own steamers all over the world. It is also exported to neighbouring Continental ports for use in the miscellaneous manufactures of those ports and neighbourhood. Machinery, again, is exported because there are foreign manufactures in which machinery is used. It is an important trade, entirely dependent on that growth of foreign manufacturing which is so much deprecated, and which we should not have at all if we put obstacles in the way of exporting machinery, or if in any other way—for

instance, by imposing duties on foreign manufactures imported into this country—we hindered the natural growth of foreign manufacturing. But the exports of coal and machinery are not the only trades which come to us because of the increase of manufacturing abroad. Much of our shipping business depends on the wealth of foreign countries. There would certainly be less of it if foreign countries did not manufacture and interchange manufactured products with us and with other countries. The shipping business again depends very largely on those very exports of coal and machinery which are themselves due to the increase of manufacturing abroad. Whichever way we turn, therefore, we appear to be driven to the conclusion that the increase of our foreign trade is not only consistent with or in spite of the increase of manufacturing abroad, but that it is closely bound up with and dependent on that very increase. There might have been a similar increase without an increase of foreign manufacturing, but it is by no means certain there would have been. What we have got is an increase that is dependent on the increase of foreign manufacturing. We may be quite sure, besides, that there are other trades than coal and iron, machinery and shipping, which are dependent on the increase of manufacturing abroad. England, as the workshop of the world, must be resorted to for every variety of article to assist the miscellaneous industry of foreign nations.

We reach the same conclusion by a comparison of the amount of our trade with different foreign countries. Our trade is by no means exclusively with non-manufacturing countries, but very largely with countries like France, Germany, and the United States, which would be those that would be named as our rivals in manufacturing. If we put imports and exports together, we find that out of a total of imports and exports amounting to £732,000,000 in 1883,

the imports and exports from and to the countries named, including Holland and Belgium, which for many purposes should be included with Germany and France, owing to the close communication between them, amounted to £336,000,000, or 46 per cent. of the total. If we consider merely the exports of British and Irish produce, we find that out of a total of £240,000,000 of such exports, £82,000,000, or 34 per cent., were to the same countries. These proportions are likewise as great as they ever were. There are no good figures of the imports before 1854, so that the total imports and exports cannot be stated till that year; but at that time our total imports and exports from and to the countries named were about £121,000,000 out of a total of £260,000,000, or almost exactly 46 per cent., which is the present proportion. As regards the exports of British and Irish produce, where we can go back to 1840, we find that at that time out of rather more than £51,000,000 of such exports, the total to the countries named was £17,500,000—again almost exactly the present proportion, which is 34 per cent. Our trade with manufacturing countries, therefore, keeps its proportion, as well as our trade with countries which are not considered rivals in the same way. The increase in the one case is as great as in the other. The increase is also enormous. To take our exports alone—as that is the factor about which there is most feeling—it is found that to our rivals whose competition is so dreaded we are now exporting £82,000,000, where we formerly exported £17,500,000 only, the amount of the increase during this period, while foreign competition has been pressing upon us, being no less than three and a half times the amount of the trade with which we began. The comparison, I believe, would be even more striking but for changes of prices which have occurred. The real increase of trade has been much greater in reality than

what appears from a comparison of values only. Taking the entries and clearances of shipping, we find that in 1840 the entrances and clearances at ports in the United Kingdom from and to the countries named were 4,000,000 tons, or $43\frac{1}{2}$ per cent. of the total from and to all countries; in 1883 the entries and clearances from and to the countries named were 31,500,000 tons, or $48\frac{1}{2}$ per cent. of the total.* The presumption is that not only has our trade with the countries named maintained its proportion of a total trade which has increased in a wonderful manner, but that it has more than maintained the proportion. Circumstances may change, but there is yet no sign in these figures of injury to our trade because of the increase of miscellaneous industry among the countries most likely to be our manufacturing rivals.

Another aspect of the facts may be looked at. We have already seen how certain home industries—the production of coal and iron, the manufacture of machinery, and shipping—probably owe their development, less or more, to the increase of miscellaneous industry abroad. It may also be pointed out that English manufactures of different kinds probably owe their development in a very direct way to foreign manufactures. The two, instead of being antagonistic, are mutually dependent. Foreign countries, as we have seen, depend upon us largely for coal, iron, machinery, and shipping. To some extent the yarns which are the staple of the textile industries may be added to the category. In other words, our own manufactures are largely co-operative with and auxiliary to various manufacturing industries abroad. Employment in these manufactures depends on the

* The data for most of these figures will be found in a convenient form in the Supplementary Tables in the Appendix to my evidence before the Royal Commission on Trade Depression.

existence of manufactures abroad. In the same way the so-called manufactures which we import from foreign countries, and about which there is at times so much excitement, are largely the raw material of a further stage of manufacturing in England. Looking over the lists of manufactured and partly manufactured articles in Mr. Ritchie's return (No. 362, Sess. 1882), one is especially struck by the fact that although the articles are, logically enough, entered as manufactures, or part manufactures, they are, nevertheless, as far as English trade is concerned, very largely raw materials. Out of £54,000,000 of "manufactures" imported in 1880, the latest year in the return,* I should estimate that at least £20,000,000 are indispensable as raw material to our own manufactures. Such articles as hides, chemical products and manufactures, skins, turpentine, tar, metal manufactures of all kinds, painters' colours and pigments, paperhangings, glass of different kinds, are all plainly less or more the raw material of different industries carried on within the United Kingdom, and to tax them would hamper our home industries and cripple us in the production of articles which we export to foreign markets. As regards the remaining articles, moreover, which are not so obviously raw materials, it has to be considered that most of them, even such articles as silk and woollen manufactures, are themselves the raw material of millinery and dressmaking, hat-making, and other industries, which are none the less important as manufactures because they are not thought of as such. Moreover, not only is a certain part of the productions of these industries exported, but our *dépôt* trade is concerned with the whole of them, as they go into our warehouses and shops, and help to attract from all parts of the world customers whose purchases are not necessarily limited to one class of goods, however power-

* The return has since been continued. See No. 102, Sess. 1885.

fully that class contributes to the attraction. Of course, what is true of the so-called "manufactures" is still more true of the "part manufactures" in the return, amounting to £29,000,000 in 1880. Here the various articles, such as sawn timber, pig and sheet lead, copper regulus, and oils of different kinds, are to all intents and purposes, so far as our home manufactures are concerned, undoubtedly raw material. Similarly, an article like refined sugar, which is entered as an article of food in the above return, though it is contended, I believe, that it should be entered as a manufactured article coming into competition with our home industries, is in reality the raw material of home manufacturing. It does not all go into consumption directly. It is used in brewing and distilling, in confectionery and jam making, in biscuit making and other manufactures, and gives employment in that form to many more people than are necessary for the refining. In this sense, also, even flour is a raw material, flour being a necessary raw material of biscuits and other articles of export. Foreign countries and ourselves are thus mutually dependent. The manufacture of one country is the raw material of another. To a large extent, the growth of manufacturing industry abroad only affects our home industry as the production of cheap raw material affects it.

IV.—SUMMARY AND CONCLUSION.

To sum up, I submit that I have fully proved the proposition with which I started, and which appears so hard to many—that the conditions of the increase of miscellaneous industry in foreign countries, arising from the increase of machinery and inventions and the diminishing proportion of the agricultural

and mining population, are favourable, on the whole, to English trade. This has been shown theoretically from a consideration of the different ways in which the population available for manufacturing abroad might be employed. In whatever direction their industry might be turned, it was seen, there would still in the end be an increase of the miscellaneous demands in the markets of the world which would benefit England as the leading manufacturing country. The same conclusion has also been demonstrated practically by the actual facts of English trade for more than forty years. All the while foreign manufacturing has been increasing, the prosperity of England has been advancing in a marvellous way, the growth of population in this country with the comfort it enjoys being unique in the experience of old countries. The foreign trade of England, which is more specially in question, has also increased in a marvellous way and to a far greater extent than that of any other foreign country, the figures on this head being simply astounding. The only way in which some foreign countries are made to appear to be gaining on us is by the manipulation of percentages, a high percentage being easily shown when there is a low figure to begin with. When the trade figures are stated per head of the population, the exceptional position of England both as regards the present amount of its foreign trade and the increase of that trade in the past is manifest. Next, it has been made evident that the actual increase of our foreign trade, large as it has been, has been an increase in the direction we should look for on theoretical grounds when the miscellaneous industry of foreign countries is increasing. The range of the articles we export has been constantly widening. Important additions are made from time to time to our staple articles, and there is a huge and growing miscellaneous trade which it is impossible to classify.

Further, a large part of the growth has been in the exports of coal, iron, machinery, yarns, and the like articles, and in shipping business, which are all dependent, not on the consumption of foreign countries generally, but on the consumption of manufacturing countries. It has been proved further that the proportion of our trade with such countries as France, Germany, and the United States remains in the aggregate as great as it was, or greater—that the growth of our foreign trade is not exclusively dependent on the existence of uncivilised countries which do not manufacture, but on the old countries also. Last of all, it has been shown that, just as our own manufactures often become the raw materials of manufacturing industry abroad, so the so-called manufactures we buy from foreign countries are largely the raw material of new industries at home, while the dealing in them assists us in the important *dépôt* trade so vital to our whole business. Thus, practically as well as theoretically, it is evident that the conditions of the increase of miscellaneous industry abroad are on the whole favourable and not unfavourable to English trade. Not only has that miscellaneous industry been consistent with our prosperity; without it the measure of our prosperity would have been much less full than it has been.

I have to apologise for the length at which I have brought forward arguments in support of a proposition that seemed to me when I wrote it in 1877 one half a truism and the other half a truth, which, though not so obvious, would have been accepted for good, after brief reflection only, by those who are accustomed to reflect on such subjects at all. My excuse must be that the subject has grown in importance as I have advanced. I have made the discovery that there are people who can reason about such facts as the inevitable increase of miscellaneous industry in foreign countries, as if the

increase could be materially promoted by the protectionist measures of foreign Governments, whereas such measures can only diminish it, and as if in turn the effect on our own trade, whatever it is, if of an injurious kind, could be sensibly altered for the better by any measures it is in the power of our own Government to take. Such an attribution of power to Governments to influence trade for good is bewildering but at the same time instructive, as showing the existence of a class in our midst to whom the simplest elements of common sense, not to speak of political economy, have to be made very plain indeed—if they ever can be made plain to such reasoners. The same class of people, I find, are also simple enough to put the question as to how a few hundreds of labourers, who may be displaced by some particular foreign competition, are to find employment, as if putting this question were a conclusive answer to the assumptions of political economists, justified by endless experience, that labour, like other things, is mobile, and that the loss of employment in one direction does not mean permanent loss of employment altogether, but may only mean temporary loss. The question too is put in England, of all countries in the world—that is, in a country which has found room in eighty years for twenty millions of new people, twice the number in existence at the beginning of the period, and the whole thirty millions, on the average, now enjoying more of the necessities and luxuries of life per head than the smaller number did at the beginning of the century. That such reasoners exist and confuse and perplex opinion by the wildest misconceptions and misstatements must be one of my excuses for trying to set in order the true ideas, as I maintain, as to the nature of miscellaneous industry in foreign countries, and its relation to our own trade. The subject is, moreover, intrinsically important and is connected

with important issues. The nature of the progress to be made, not only by ourselves, but by other peoples, as machinery and inventions multiply, and the masses are better fitted to use them, is surely a problem of the deepest interest, quite apart from its bearing on such petty controversies of the moment as that of fair trade. Such a question, for instance, as the remuneration of labour in each country concerned may depend on it. An event which is steadily approaching, as far as I can judge, is the equalisation of conditions in different countries, so that the prosperity of all the great countries is becoming more and more a leading concern of each, and especially the concern of the workmen in each, as the remuneration of labour cannot rise or fall in one country without rising or falling in all. For these reasons, quite apart from momentary controversies, a right apprehension of the facts as to the increase of miscellaneous industry abroad is expedient. On the whole, though with many transitions and changes, I should anticipate beneficial results ; but the fact of our moving into a new world, without power to prevent the movement, should itself be recognised and studied, whatever the results may be.

I may, perhaps, be allowed to add one or two remarks to prevent some simple misunderstandings.

1. I have been dealing only with an increase of manufacturing abroad under natural conditions. This is quite evident, I should hope, from the constant association I have traced between this increase and the relative diminution of the numbers of people engaged in agriculture and mining as compared with those engaged in other industries. Consequently, it is not inconsistent for me to maintain that an increase of manufacturing abroad due to protectionist measures is not the same thing, and will not have the same results, as the natural increase. The whole change in such

a case, involving a diversion of industry from the more profitable to the less profitable employment, must, of course, be injurious to all concerned. At the same time, this qualification is not material for the purpose I have had in hand. Substantially, the increase of miscellaneous industry abroad with which I have been dealing is due, not to protectionist measures, but to natural causes. Even in the United States the miscellaneous industry which is unprotected enormously exceeds the protected industry which it is taxed to support. The assumption that foreign manufacturing has largely increased by means of protection is one of those wild assumptions which constantly crop up in a certain species of political and party literature, but for which it is never possible to find a scintilla of evidence, and which are entirely opposed to broad facts regarding which there can be no dispute. The greater part of the miscellaneous industry of every country is of a kind which cannot be protected because it is necessarily home industry.

2. An increase of free trade abroad would undoubtedly increase miscellaneous industry there. Protection keeps every nation that suffers from it poorer than it would otherwise be, and hinders the natural development of trade. Such an increase of miscellaneous industry, however, would, in my opinion, and according to the arguments I have advanced, be favourable to English trade. Apparently opposite views have been expressed by good authorities in which I cannot join. The United States, it has been said, must cut out England in many markets if they become free trading, and consequently do us much damage. The "consequently" I do not agree to. The immediate and transitory effect appears to be mistaken in this reasoning for the permanent effect. Relatively, perhaps, the United States, with all its natural advantages, may advance quicker under free trade than we

shall then do; but absolutely we shall be better off. We shall advance quicker than we should otherwise do, and shall be all the richer because of the increased wealth of so large a customer and neighbour.

3. While we can do nothing to prevent the increase of miscellaneous industry abroad due to general causes, we may certainly by protectionist measures promote some sorts of manufacturing abroad to our own hurt. I have referred already to such an effect having resulted from our protectionist measures before 1843. There can be no doubt that such an effect was produced. By taxing foreign corn coming into this country, we rendered Saxony and other countries, as we would not take their corn from them, unable to take our manufactures, and forced them to manufacture for themselves. This was the origin of a good deal of manufacturing in Saxony, and it was, in part, to prevent such mischiefs that our corn duties were finally abolished. The whole change involved in such an increase of manufacturing abroad is, of course, injurious, because industry is diverted from its natural channels. Both England and Germany were injured by the change.

It does not follow, moreover, as I have seen it argued, that every sort of protection in one country promotes manufacturing in another. It was only protection on the import of corn into this country which compelled the country selling corn to take to manufacturing. The poverty caused by the process ought also to be considered in such a question. Manufacturing, as a whole, was diminished by the process, and both England and Saxony were poorer, whereas with an increase of manufacturing under natural conditions all concerned are enriched.

4. The effect of any protectionist measures in England, owing to the miscellaneous nature of our trade, would be

immeasurably disastrous. Our trade is too big and various to be tampered with. If we put duties on corn, apart from other evils, we shall promote, as we did before, some manufacturing abroad to our own hurt and injury and the disadvantage of all concerned. If we put a tax on so-called manufactures, we shall hamper our own manufacturing development, prevent the exchange of manufactures which now takes place, injure our shipping, and inflict a thousand evils which it would be impossible to foresee, even if it were possible to imagine the tariff which our Ecroyds and MacIvers would apply to English imports.

5. The fact that so much trade has been developed in the last forty years, owing to natural conditions, is of the best augury for the eventual triumph of free trade. Personally I have never been able to take the slightest interest in fair trade literature or controversy, not only because of the staleness of the discussion, but because, in fact, free trade is continually triumphing. Not only is England, the leading commercial country, committed to it irreversibly, but the natural forces are everywhere making ridiculous the efforts of ignorant politicians, surely an ignorant class everywhere, who think they can snatch a petty advantage for some particular trade. There is much more, very much more, freedom of trade in the world than there was forty or thirty years ago. Prohibitive tariffs are things of the past; the high tariffs replaced by the Cobden tariffs have not again been restored; the tariffs which exist, high as they are, have been largely neutralised by cheap railway communication, cheap freights, increased telegraphic facilities, improved harbours, enterprises like the Suez Canal, and other expedients. Particular Governments may fight against the tide in human affairs which is strongly setting towards the most unrestricted trade between all countries, but, looking to the progress of

the last half century, they will apparently fight in vain. The volume of business in all directions is swelling, mocking the petty interferences of politicians ; and these interferences, I believe, before very long—in a period which must be counted as short in the history of nations—will be too irksome and ridiculous to be endured. In any case, the growing magnitude of the trade that is really free, the growing insignificance of tariffs, owing to the strength of natural causes fighting against them and promoting the trade which they hinder, must not be lost sight of in all these discussions ; nor must it be concluded that because many public men and politicians here and abroad, for sectional and party purposes, talk protection and favour protectionist expedients, therefore the principles and practice of free trade are losing ground. The doings and acts of politicians bulk largely in the public eye, but they are not the only things that count. The fair trade politicians at home are mainly mischievous because their speech and writing give the idea abroad that the commercial leaders of England are not equal to the high position they have attained, and no longer possess that untiring energy and elasticity which gained them a leading place, and which induced their predecessors sixty years ago to petition the Government of that time to let them alone. [1885.]

VIII.

THE UTILITY OF COMMON STATISTICS.*

IN commencing our labours for another session, we are painfully reminded that during the past twelve months the Society has sustained two heavy losses, in the death of Mr. Newmarch and Professor Jevons. At a meeting like the present, some tribute is due to the memory of these distinguished members. To some extent a record of Mr. Newmarch's death and services has already been preserved in our proceedings, but something, I feel, ought also to be said at this inaugural meeting, considering his many and diversified statistical labours, and the length of the period during which he was identified with us, first as Secretary and Editor of the *Journal*, and afterwards as President. The death of Professor Jevons—all the more to be regretted as a lamentable accident—has occurred since the last meeting of last session, and this is the first opportunity we have had of paying a tribute to his memory.

With regard to Mr. Newmarch, it will be unnecessary to go over the record of his life in detail, or to enumerate his various works; of these a very full account will be found in the March number of the *Journal* of this year. What I should like to do now, is to put on record the special consideration in which he was held here for his knowledge of economic statistics, especially trade and banking statistics,

* Inaugural Address as President of the Statistical Society. Delivered on Tuesday, 21st November, 1882.

and his skill in using them. He was remarkable not merely as a statistician, but as a man of business and as an economist, and his special *forte* as a statistician was to throw light on problems connected with the theory of business—especially banking—and on the applications of political economy to the real world by means of statistics. In labours of this kind he was among the first in the field. Mr. Tooke, whom he recognised as a master, had preceded him as a pioneer, showing the way to reason out disputed points in the theory of currency and banking by statistical illustrations from actual business experience: his demonstrations on such points as the dependence of prices on credit, and the fact of a rise of prices preceding and not succeeding the expansion of a paper currency, being still among the best examples of the right use of statistics in economic discussions. But Mr. Newmarch followed in the steps of his great master with a command of facts, and a power of analysing and grouping figures, which in the same field were at that time without example. His most signal achievement was the preparation of the last two volumes of the ‘History of Prices,’ a book well known here, though it has been long out of print. The information and comments in those two volumes on the great economic changes about the middle of the present century, including the introduction of free trade, the Bank Charter Act, the Irish famine, the French revolution of 1848–51, the gold discoveries in Russia, California, and Australia, and finally the Crimean war, make them still a most valuable record; while the discussion on many points of banking practice and economic theory, especially on all points relating to the use and abuse of credit, and the periodicity of movements in trade, remains to this day the fullest exposition on these topics to which the student can be referred. There are better books perhaps on single points, such as Mr. Bagehot’s

‘Lombard Street,’ in which the constituent elements of the money market are described, and the theory of a bank reserve is set forth and illustrated; but the number and variety of topics in Mr. Newmarch’s book, and the way in which the various economic movements of the time are grasped and set in one picture, make it of unique value. Whether it is the effect of the gold discoveries in bringing new resources into the money market, and giving a vast impetus to trade, or the effect of a great movement of migration on the trade of old and new countries alike, or the financial consequences of a great war, Mr. Newmarch is at home in the discussion. Apart also from the light it throws on the special questions treated, and as regards which it may be of course superseded by fuller and later statistics, and by wholly new circumstances, the book must long remain of value, I believe, as a specimen of method and of what can be done by the use of statistics. Indirectly, I believe, it has been the beginning of much financial writing, as it is really the parent of a book like M. Neumann-Spallart’s ‘Annual Review of the World’s Trade,’ on the one hand, and of much of that writing on “trade and finance” and those columns of “City notes” which we now see in many newspapers. Mr. Newmarch, in fact, popularised the idea that the daily changes in the movement of business can be generalised and referred to the working of the laws of human nature, and in a thousand ways the idea has been worked out and made useful to the world. That in the end the course of business will be better understood generally, with useful results both to business men and to society, there can be little doubt.

Besides thus recognising Mr. Newmarch’s special place as a statistician, we are bound to say a few words here on his special services to the Society. Among these I would place in the first rank his labours as editor of the *Journal*. Look-

ing over the back numbers, it may be perceived that from the time he took the *Journal* in hand there was not only a considerable improvement in the miscellaneous information, which was more particularly in his own care, but an improvement as well in the general character of the papers read at our meetings. One explanation of this improvement must of course have been the steady growth of the Society in numbers and resources, and in the standard of statistical excellence; but the improvement was not altogether a spontaneous growth from below, it was encouraged from above in a variety of ways. I can speak from personal knowledge of Mr. Newmarch's exertions to make the best use of his materials, and to diffuse a genuine love and appreciation of the study he favoured. It was extremely characteristic of him that to the last he was strongly interested in young men. Wherever he could see any talent or liking for economics and statistics in a younger generation than his own, he was the first to applaud. I am proud to acknowledge for myself that I owe the beginning of my close connection with the business of the Society to Mr. Newmarch's kindness, and I have had reason to observe in many other cases his warm interest in youth, and the pains he took to encourage and bring others forward. His services, however, were manifold, and it is only fitting that, as he identified himself so closely with us, we should do honour to his name. The success of the Newmarch Memorial Fund must be to all of us a matter for satisfaction. The memory of the great services he rendered will be perpetuated in an appropriate manner.

In the death of Professor Jevons the Society has also sustained a very great loss. Partly because he was so much junior to Mr. Newmarch, and had probably many years of life left in which to render us distinguished service, and partly because of the engrossing nature of his literary work,

which made formal business distasteful to him, Mr. Jevons never took the prominent part in the daily work of the Society for which his eminent gifts and labours as a statistician so well qualified him. He was for some years, however, one of our secretaries, a regular attendant of our meetings, and a frequent contributor to the *Journal*. In the proper work of a statistician, moreover, there are few men who have left a better name on our records. I need only refer specially to three of his principal works. Twenty years ago, when he was still comparatively a young man, his book on the depreciation of gold arising from the gold discoveries justly attracted no small attention, both from the completeness of the method employed, and the striking character of the conclusion which he came to—that while there had been depreciation to a moderate extent, there had been no such depreciation as many great economists had anticipated. A few years afterwards his book on the “Coal Supply” drew attention to a problem which is inevitably raised by the limited character of the English coal field, and the rapidly increasing demands upon it. This book had a wide success of notoriety, and it was unfortunate, perhaps, that it was only too popular, the public, which seldom makes nice distinctions, running away with the notion that Mr. Jevons predicted the actual speedy exhaustion of the English coal supply. This, of course, was nonsense. His real conclusion, however, viz., that one of the present conditions of English prosperity was rapidly altering for the worse was undeniable, and was amply justified by the experience of the coal famine of 1873. Few more interesting books have, perhaps, been written; and there are few better examples of the kind of statistical works which ought now, with the increasing breadth of statistical data, to be more largely written, viz., those dealing with the characteristic social and economic problems

of the age. It is to such works statesmen and politicians must look for a right comprehension of their task. Shortly afterwards, in 1868, Mr. Jevons read a paper on the state of our gold coinage, in which the same thoroughness and completeness exhibited in all his statistical works was again conspicuous, and which has since been the model of more than one similar inquiry. Besides these, Mr. Jevons wrote many smaller works, which were all characterised by great completeness of method; but these three larger works are quite sufficient to found his reputation. They all show inventiveness and resource, and a careful attention to every point which can qualify the figures so that the real facts, and not the apparent ones, are brought out. An index number, such as he used in the first paper of all on the gold question, has proved an instrument of great value since in all inquiries on prices; and for this institution of an "index number" we may consider ourselves indebted to Mr. Jevons.* In the later years of his life Mr. Jevons became even better known as an economist and a writer on logic than as a statistician, the place he took being a high one; and without discussing his work in that capacity, we must recognise how his qualifications for other departments of literature were no disqualification, but the reverse, for the study and practice of statistics. His statistics would not have been as good as they were if he had not had wider interests, and a remarkable faculty for clear scientific exposition in other branches of science.

Such are the two men we have lost within the short period of twelve months. The loss is a heavy one; but few would have been more ready to recognise than those we have

* An index number was used by Mr. J. B. Smith as long ago as 1840 in giving evidence on the Bank Acts, but whether he was actually the first inventor I do not know. Practically, Mr. Jevons was the first to systematise the use of the method.

lost that the work remains, whatever becomes of the individual. With Mr. Newmarch this feeling, as I have already hinted, was always present. It was always of good work in statistics and not of his own good work he was thinking. If younger men could be induced to come into the field, he was but too well pleased to give up the task to them, so long as the work was done. His example and spirit will be handed down, I trust, through many generations of labourers at these meetings. In another point also the example and spirit of both Mr. Newmarch and Mr. Jevons, it may be hoped, will be imitated. I have already glanced at the point, but it may be specially emphasised. It is that they were neither of them specialists, but they were both otherwise distinguished—Mr. Newmarch as a man of business and an economist; and Mr. Jevons, as a *littérateur*, a man of science, and a logician. It will be an unfortunate day for us if men of business like Mr. Newmarch, and men of general scientific and literary eminence like Mr. Jevons, do not take an interest in our pursuits. Statistics are related to so many different sciences, and the knowledge of them is so essential to the politician and historian, that there is no study which is more certainly failing to obtain its proper place, if it is not known to and made use of by those who are identified with other pursuits and by men of general culture.

I am sure you will not think I have taken up too much of your time in doing honour to the friends whom we have lost. I pass on with some diffidence to deal with some topic of general interest, such as you have been accustomed to have dealt with in their introductory addresses by my predecessors. In recent years the field has been very fully occupied. You have had such papers, for instance, as that of Mr. Lefevre, on the use and abuse of statistics, covering a great deal of the

ground for discussion on the theory of statistics. You have had other papers by experts in particular branches of statistics, such as the addresses by my distinguished immediate predecessor,* on the agricultural depression of the country and the probable future of the agricultural industry. The field of new observation has thus been greatly reduced. It has occurred to me, however, that without attempting a new discussion on the theory of statistics, or giving an address on some particular topic of urgent interest, I may perhaps be able to say something useful, by pointing out some of the uses to society of the more common figures of statistics, especially those figures which assist in modifying or directing the political thought of the time, or in presenting problems for politicians and philosophers to consider, even if they do not much assist in the solution. The greater successes of statistics, and their main uses, though not so well known as they should be, are nevertheless fairly understood. The construction of life insurance tables, for instance; the means of comparing rates of mortality in different places, and in the same places at different times; the constant utility of statistics in political discussion, and their equal utility in daily business—are all matters tolerably well known and admitted. But what seems not to be so well understood is our indebtedness to the common figures of statistics for many wide and far-reaching political ideas, which influence and guide political thought and action and philosophic speculation insensibly. With the systematic collection of statistics continued for many years, there has come to be published a whole library of statistical annuals—whether they are official statistical abstracts or *annuaires*, such as many countries now publish, or unofficial publications like the ‘*Annuaire de l’Economie politique*,’ or the

* Sir James Caird.

'Statesman's Year Book,' or M. Neumann-Spallart's 'Annual Review of the World's Industry.' These books, it seems to me, besides having many practical uses, supply a necessity of political thought at the present time, and are constantly and insensibly guiding political and philosophical speculation. What I propose to discuss to-night, then, are some of the more common figures which lie on the surface of the most accessible books. As with other good and common things, we have become so used to such books that we hardly know what we should miss if they were blotted out,—if public men and writers were without them, as in fact they were without them until about half a century ago. If we attempt to realise what we should do without such books, we shall not fail to see that statistics have many unsuspected uses, and not least are they useful for the knowledge they insensibly diffuse throughout the world.

I shall deal more especially with the most common figures of all, viz., those of population. The utility of the most general notion which we derive from statistics of the distribution of the earth's surface among different races and nations is palpable. We can see at once that a small corner like Europe is closely peopled by the European family of nations, whilst the northern peoples of that family also possess a large new field of territory in North America, Australia, and Northern Asia, and the more southern peoples a large new field of territory in Central and South America. The European family is thus *de facto* in possession of a large tract of the earth's surface for its own habitation, perhaps a half or more of the area available for producing the food of civilised races. Further consideration would show what races in particular, among the nations of Europe, have this inheritance; but the point is, the predominance of the

European race in mere extent of territory, coupled with the peculiarity that the bulk of this population is still living on a comparatively narrow tract in Europe. The rest of the world—China, India and Africa—is possessed by races of greatly differing type, on whose territory Europeans do not press as colonists, though they may settle in small numbers as governors, or traders, or both. Granting, on the average, a difference in point of material strength per unit of population between these European and all other races, it is easy to understand at once the idea that the future of civilisation belongs to the European group, and that the problem of how the other races are to live in harmony with the European group without being jostled, and in what way they are to be affected by the European civilisation, is one of the most curious presented for the solution of modern societies. If the European numbers were less, the problem might well be whether European civilisation, in spite of its assumed superiority in type, could maintain itself. The numbers and rate of increase being what they are, it is easy to see that the main problem resulting from the relations of the European and non-European races cannot be whether the European civilisation will be able to maintain itself by force, but how it will be affected by its varying relations to the other races.

Confining ourselves again to the European group, and first of all to the nations within European limits, another leading fact in international politics is immediately suggested by the statement of the numbers of the people. This is the existence of five leading powers—Russia, Germany, Austria, France, and the United Kingdom—each greatly stronger than any of the other powers not among the five, except two; each big enough to “take care of itself,” though there are, of course, differences of strength between them; and besides

these, the two others excepted, viz., Italy and Spain, which come short of a first place, but by a less degree than the minor States. All these relations of the great powers are based largely on the mere enumeration of the peoples. Three out of the five, viz., France, Austria-Hungary, and the United Kingdom, have each about the same population, in round numbers, 35 to 38 millions; one of the others—Germany—has about one-fourth more, and Russia only has a much larger number in Europe, viz., 80 millions. While numbers, therefore, are not everything, or Russia would be preponderant, which is notoriously not the case, and Germany would not, as it does, count for more than in proportion to its numbers, and the United Kingdom would not have a peculiar position among the others, on account of the undeveloped state of its military resources on the one side, and the immensity of its wealth and latent strength on the other side, yet it is obvious that the mere numbers are a most vital element in appreciating the political position of these five powers and the lesser powers around them. Perhaps if statesmen were always wise, and rulers and peoples free from prejudice and passion, the popular knowledge of the figures would be even more serviceable than it is in demonstrating the absolute insanity of offensive war. It is impossible to conceive what object any of these five great powers could gain by the misery and suffering of war with another, adequate to repay that misery and suffering: the very magnitude of the wars forbids the possibility of gain.

The past history and future prospects of the balance of power among these nations are also illustrated by a mere consideration of the numbers. We have only to glance at the population of the different States as at the close of the great wars in 1815 and as they are now, to see that great changes have happened:—

	1815.		1880.	
	Population in Millions.	Per Cent. of Total.	Population in Millions.	Per Cent. of Total.
Russia in Europe ..	48	33	80*	34
Germany †	21	14½	45	19
Austria-Hungary ..	28	20	38	16
France	29	20½	37	16
United Kingdom ..	17	12	35	15
Total	143	100	235	100

Thus in 1815 a compact France possessed several millions more than the population of Germany, nearly twice that of the United Kingdom, and more than half that of Russia. Austria-Hungary also came near, as it now does, to the French numbers. Now the population of Germany considerably exceeds that of France; that of the United Kingdom is nearly equal, and that of Russia is more than double. These facts correspond very closely with the transfer of military preponderance on the continent from France to Germany, and with the increasing prominence of Russia, which would probably be much more felt but for the simultaneous growth of Germany. They also explain why it is that the United Kingdom, with an economic and social development resembling that of France in many respects, has fallen less behind in the political race; why its relative position among European powers, though not what it was fifty years ago, is less weakened than that of France has been. Fifty years ago it was the leader among powers which were occupied in

* The exact figure by the last census is 84 millions, but I have preferred to be a little under the mark, so as to allow a little for more exact enumeration in the latter censuses. For the present purpose the difference between 80 and 84 is immaterial.

† Germany was also much divided in 1815.

restraining France, singly a greater power than any. Now it is about equal in numbers to France, although its whole position is changed by the fact that no power, not even Germany, preponderates to the same extent as France once did.

As regards the future again, what the figures suggest clearly is a possible rivalry between Russia and Germany, and the farther relative decline of Austria and France—the United Kingdom continuing to grow, but occupying from year to year a different place, as its interest in the so-called balance of power becomes less. Our change towards Europe is, however, affected in part by the growth of our relations beyond seas, which is another of the great facts of population, evident on the surface of the figures, that I shall afterwards have to notice.

Of course these changes have had the effect of raising questions of domestic, as well as of foreign, interest; and here again we are indebted to statistics mainly for the suggestion of the questions. One of these questions is, in the case of France, what are the causes and probable consequences, socially and economically, as well as in its relations in respect of the balance of power to its neighbours, of the stationariness of the population? This is one of the most remarkable facts, both in itself and in comparison with the facts of other countries, which population statistics disclose. The present would not be the place to discuss the answer to the questions raised, or the solution of the problems involved. All I am concerned to point out is that it is to the common figures of statistics, such as did not exist until the present century, that we owe the putting of the questions for answer. But for them it would not have been quite certain whether the population of France was stationary or

not. Now the facts are exactly known and even familiar, and discussion goes on. Another question presented is as to the increase of population in countries like Germany and Russia, and the rapid encroachment there has been on the unused agricultural resources of those countries. As the stationariness of the population in France, however beneficial in some social aspects, is not an unmixed good, because it weakens France in its external political relations, so the increase of population in Germany and Russia, while they still remain mainly agricultural, appears to be attended by some mischiefs. The social condition of the rural population of Germany leaves much to be desired, as we may see from the extensive emigration, and from the difficulty of increasing the national revenue. In Russia, again, the threatened difficulties appear most formidable. Until lately Russia has been largely in the condition of a new country, with vast quantities of land over which a growing agricultural population could spread. Now the European area is more or less filled up, and unless the vast territory of Siberia can be largely utilised for settlement, which appears doubtful, the pressure of population on the means of subsistence in Russia may soon become very great. The soil may be capable of supporting with better agriculture a larger population: but this is not the point. The kind of agriculture possible in any country is related to the existing capacity of the population, or to such improvements in that capacity as are in progress, and with the Russian population as it is, there are certainly traces in Russia of an increasing severity in the struggle for existence, which may at any moment become most serious. The change in the conditions of expansion for the population internally as compared with what they were fifty years ago ought at any rate to be recognised at the present day, suggested as they are by the most obvious

statistics of Russian population. Italy, it may also be noticed, is fast increasing its population without any increase of new soil or corresponding increase of manufactures.

Last of all, another fact presented by these obvious figures is the dependence of the population of the United Kingdom very largely, and to a less degree of France, Germany, Belgium, and Holland, on the importations of food from abroad. The facts as to the United Kingdom have been much discussed in all their bearings lately, Mr. Bourne, as we know well, having taken a large part in the discussions; but you have only to turn to the pages of the "Statistical Abstract for Foreign Countries," to perceive that the United Kingdom is not quite isolated in the matter. It is much more dependent in degree than any other European country, but in the fact of dependence it is not altogether singular. The fact is of course partly due to the increase of population in far greater ratio than the increase of agricultural production, the prediction of Malthus, that the population of England would not be supported on the soil of England if it increased at anything like the rate in his time, having thus been verified, though not exactly as he anticipated; but it is also partly due to an increase in the consuming power of the same population, and the larger consumption of more expensive kinds of food, requiring larger proportionate areas to produce them. France, with a stationary population, increases its imports of food, and the increased consumption per head among our own population of the quantity of such articles as sugar and tea also suggests that articles of home agricultural production are now consumed more largely than they were twenty years ago or more by the same numbers. To these two causes combined then, the increase of population and increase of consuming power per head, coupled with a comparatively stationary agriculture, Europe owes the

unique phenomenon of large masses of population supported by imports from foreign and distant countries. The social and political consequences of this new fact must be manifold, and again it is to the common figures of statistics we owe our knowledge of it. This great fact would hardly be known at all if periodic censuses and the system of recording imports and exports had not previously been introduced.

Socially and politically perhaps the phenomenon is not yet sufficiently appreciated, and as compared with what it will be, it is probably only beginning to be important, but it is one which must before long play an important part in international politics and in the economic life of nations. Both the countries which grow the surplus food and the countries which receive it are profoundly concerned.

In another way the internal growth of population in different countries of Europe is also connected with great political changes. In Germany, for instance, it was partly the special growth of the population under the Prussian monarchy which assisted to make United Germany. In Russia, again, the great growth of population outside Poland has, from year to year, and decade to decade, dwarfed the Polish difficulty as a bare question of the balance of power in Russia. But we have even a more striking case of political change from the internal changes of population nearer home. Every one must have been struck, during the last few years, by the calmness of the country generally in presence of Irish agitation, and the evident hopelessness of any insurrection arising out of that agitation. When Mr. Parnell and other Irish Members were arrested in October last year [1881], and the Land League suppressed, there was hardly even a fractional fall in consols. Forty, fifty, eighty years

ago, things were entirely different, the Irish difficulty being incessantly spoken of as most menacing, which indeed it was. The present calmness and the former apprehension are obviously due very much to a mere change in population numbers. Ireland, at the beginning of the century, held about one-third of the population of the United Kingdom; as late as 1840 it still held very nearly one-third; now its population is only one-seventh. Apart from all relative changes in the wealth of the populations, these changes in numbers make a vast difference in the Irish difficulty. It becomes easier for us on the one hand to bear the idea of an alien State like Ireland in our close neighbourhood, wholly independent, or possessing Home Rule like the Isle of Man or the Channel Islands: the power of mischief of such a community is less to be feared by a State of England's greatness than was the power of a separate Ireland fifty or eighty years ago, by the England of that time. A separate Ireland then might have been used by France against the very existence of the English Empire and the independence of England itself. Now this would hardly be possible either to France or to any other State. On the other hand, any possible insurrection in Ireland is as nothing to the power of the United Kingdom compared with what it would have been when Ireland held a third of the whole population. Hence the calmness of recent years in comparison with the agitation of a former period, and which is all the more remarkable because the agitated memories survive and colour a good deal of the thought about the Irish difficulty still. A still more careful examination would show, I think, that the difficulty has diminished in intensity—that it is the alien part of Ireland which has most diminished in numbers, while the loyal part—Ulster—has relatively increased; but here again I wish to confine myself to patent and obvious

figures, the lesson of which has more or less sunk into the popular mind.

It is not difficult to perceive, moreover, that these changes in figures must gradually tell more effectively than they have yet done on the Irish difficulty. In 1832 Ireland was endowed with one hundred and five members, its proportion of the population of the United Kingdom being then one-third. If one-third was then considered to entitle it to one hundred and five members, one-seventh, it is clear, would only give it at the present day about forty-five. Of these forty-five, again, one-third would be from Ulster, and almost exclusively among the remaining two-thirds, or thirty in all, if we are to judge from the present appearance, should we find Home Rulers. The parliamentary Home Rule difficulty would thus seem to have largely arisen from the failure to adapt the representation of the country to changes in the population. There is certainly nothing in the increased wealth or vigour of the Irish population compared with that of the rest of the United Kingdom, to suggest that Ireland should have a larger representation in proportion to its population than it had in 1832; yet if its representation were only to be reduced in proportion, the parliamentary difficulty would largely disappear. Even if no greater change were now to be made than the introduction of equal electoral districts, and assuming that the present changes in population continue, and that Irish representation is adapted to the probable relative population of Ireland and the United Kingdom at the next census, then the representatives of Ireland in Parliament would be reduced from one hundred and five to eighty-three, and of these eighty-three only fifty-five would be sent from those parts of Ireland in which there is disaffection, so that the maximum number of Home Rulers, unless there are great changes of party, which I am not

discussing, would apparently be less than fifty-five. Of course I am not discussing the possibility or expediency of any political changes. I am merely pointing out the ideas which the figures on the surface are suggesting for consideration, and which must affect the politics of the next few years. Here again it is the common figures of statistics—those derived from the systematic record of facts commenced within the last century, and only brought to a condition of tolerable advancement within the last fifty years, which are so fertile and suggestive.*

Still continuing the use of the most common statistics of population, I propose next to direct attention to one of the most formidable problems which have to be dealt with by our imperial government, and for the knowledge of which we are mainly indebted to statistics. I refer to the growth of the population of our great dependency—India. I have already referred in the most general terms to the peculiar and complicated relations which are likely to grow up between nations of the European family and the races or nations of different types. At no point are these relations more interesting than they are in connection with the supremacy the English race has gained over the subject races of India. The point of interest in these relations for our present purpose lies, however, chiefly in this—that the Roman peace we have established in India appears to be effective in removing many obstacles to the growth of population which formerly existed—what Malthus described as the natural checks—so that under our rule the Indian population is growing in numbers from year to year, and trenching with alarming rapidity on the means of subsistence.

* See *postea*, p. 333.

I believe I am within the mark in saying that there is no more anxious subject for the consideration of our public men. The late Mr. Bagehot I know was profoundly impressed by the fact, and repeatedly wrote his impressions, though I do not remember whether anything he wrote is collected among his published writings. Others of our leading public men and economists are also deeply impressed by the fact, though it is considered almost too delicate for public discussion. There can be no doubt, however, of the formidable nature of the problem. India has now on its 1,400,000 square miles of territory a population of 240 millions—I am dealing in round figures—or about 170 to the square mile: not an excessive proportion according to formal comparisons with other countries, but in reality leaving the people no margin. It appears, from the most careful studies, that whatever the number of people to the square mile, there is very little new and fertile soil to appropriate; that much soil has been so appropriated during the last century of our rule; and that the population continues to grow fast without any increase of the land revenue, or any other sign that land is being rapidly taken into cultivation—with signs on the contrary of exhaustion in the agriculture, and of an approach to the limits of production according to the means at the disposal of the population. So much is more or less accurately known by statistics; and of the cardinal fact—the magnitude and increase of the population—it is statistics from which we learn everything. The broad figures are here not so clear as they might be, because improved methods in taking the censuses have from time to time revealed larger populations than could be accounted for by taking the totals of one previous census and adding the probable or possible increase of population meanwhile; but of the actual fact of increase between two census periods there is no doubt, while the rate

of increase, if we are successful in coping with famines, proves to be nearly 1 per cent. per annum. In ten years, therefore, there will be 20 millions more people in India to feed ; in twenty years upwards of 40 millions more ; and the problem thus brought before the Indian Government is in what way and by what means so to develop the character of the people that their industry may become more efficient upon practically the same soil. Failing any speedy alteration in the character of the people, the prospect seems inevitably to be that in India from decade to decade larger and larger masses of the semi-pauperised or wholly pauperised, the landless classes, as Sir James Caird calls them in the Famine Commission report, will grow up, requiring State subventions to feed them, and threatening all attempts to reform Indian finance, while raising social and political difficulties of the most dangerous kind. It seems certain, then, that India for many years to come, will be an increasingly dangerous problem for our statesmen to deal with—the more dangerous perhaps because any change in the character of the people, bringing with it increased energy of production and increased strength of character altogether, will also bring with it a rise in the scale of living, tending to make the masses discontented instead of submissive to their lot. Whatever course events may take, our rule in India must apparently for generations become a problem of increasing difficulty and complexity. The problem is analogous to what seems to lie before a government like that of Russia, with this difference, that the government is in Russia a native institution, whereas in India it is that of an alien nation governing a host of subject races.

I shall be told, perhaps, that if statistics suggest problems like this, they are only making us uncomfortable before the time : the evils apprehended are purely speculative. But in

the case of India this cannot be said. The actual creation of a famine fund is a proof that the evil is imminent. The fund is created in order to secure that large numbers of people are kept alive in times of famine, millions being in this way semi-pauperised. The prospect is that before long there may be millions to be kept alive in non-famine and famine years alike, people without land or means of living, and without the possibility of being employed as labourers. This remedy of a famine fund may be unavoidable, but from the point of view of civilisation and progress it is little more than a confession of the hopelessness of the difficulty.*

The last broad fact I shall refer to as presented and made familiar to us by these statistics of population, is that of the growth of population in the United States—a subject, perhaps, of even greater interest than any I have yet referred to, and complicated also with one or two interesting questions already glanced at, viz., the existence and increase of large European populations which are supported by imports of food from new countries, and mainly from the United States. In this case I may have to make some use in passing, not merely of common and familiar figures, but of a few less generally known; but I shall use none except what are easily accessible, and in all cases the ideas to be presented will be those suggested by what is common and familiar.

The broad fact presented by the United States is that of

* The statistical evidence since this was written seems to show that the people of India are in fact improving rapidly, in a material sense; that the increase of the means of subsistence is more than keeping pace with the growth of population. But experience is too limited for this improvement to be depended upon as certain of continuance, while as explained in the text the growth in material resources of an increasing population will bring with it difficulties of another kind.

the doubling of the population in periods of about twenty-five years. There is a little doubt about the exact population at the time of the War of Independence, and down to the first census at the beginning of the present century, but for the present purpose the figures we get are good enough:—

	In Milns.							
1780	3	0						
'90	4	0						
1800	5	3						
'10	7	2						
'20	9	6						
'30	12	9						
'40	17	1						
'50	23	2						
'60	31	4						
'70	38	5						
'80	50	1						

1908

1000

In other words, the population of the United States has multiplied itself by sixteen in the course of the century—this being the result of its doubling itself every twenty-five years for that period. In another twenty-five years, at the same rate of increase, the population will be 100 millions, in fifty years 200 millions, in seventy-five years 400 millions, and at the end of a century 800 millions! Such is the first aspect of the broad fact presented to our consideration by the increase of population in the United States. The rate is such as to be fairly bewildering in its probable consequences. The phenomenon is also without a precedent in history. There has been no such increase of population anywhere on a similar scale, and above all no such increase of a highly civilised and richly fed population. The increase is not only unprecedented in mere numbers, but it is an increase of the most expensively living population that has ever been in the world. For the idea of such an increase we are indebted

exclusively to statistics. The United States, among the other new ideas of old civilisations they have had the benefit of, have had the idea of a periodical census, which is even made a part of their constitution, and as the result we have before us, not only in a general way, but with some precision, so that discussion may have an assured basis, this phenomenon of an unprecedented increase of population which is perhaps the greatest political and economic fact of the age.

The fact has altered in the first place the whole idea of the balance of power of the European nations. A century ago the European nations in their political relations thought little but of each other. Now the idea of a new Europe on the other side of the Atlantic affects every speculation, however much the new people keep themselves aloof from European politics. The horizon has been enlarged, as it were, and the mere fact of the United States dwarfs and, I think, restrains the rivalries at home. European Governments can no longer have the notion that they are playing the first part on the stage of the world's political history. And this sense of being dwarfed will probably increase in time. In this country, at any rate, we cannot but feel greatly attracted by the United States. Because of the magnitude of that country, the European continent is less to us—our relations are elsewhere.

It is in connection, however, with our own home problems of population that the increase of the United States is most interesting to us. The increase is partly at our expense, and at that of the other European nations. If the United States or some other new country had not received our emigrants, it is quite clear that our whole history would have been different from what it is. We should either have had in our midst the people who emigrated, and their descendants,

straining the resources of our soil and mines and capital, or the pressure upon these resources would have checked in various ways the growth of the population itself, so that probably at this moment, but for the new countries, more people would now be living in the United Kingdom than there are, and larger numbers of the population would be paupers, or on the verge of pauperism. The actual numbers we have lost altogether, and specially to the United States, have been :—

	To United States.	Altogether.
Before 1820	50,000	123,000
1820-30	100,000	247,000
'30-40	308,000	703,000
'40-50	1,094,000	1,684,000
'51-52*	511,000	704,000
'53-60	805,000	1,312,000
'60-70	1,132,000	1,571,000
'70-80	1,087,000	1,678,000
Total	5,087,000	8,022,000

Some correction of these figures would be necessary in the earlier years for foreigners included, and in the later years for persons returning home, but the correction in the present view would make no material difference. If these people had not emigrated, and had increased as the rest of the population has done at home, the existing population in the United Kingdom would now be many millions more than it is. The difference made by the emigration to the United States alone must be a good many millions.

The influence of the United States and other new countries has been greater still. On a rough calculation about 12 millions at least of the people of the United Kingdom live

* Previous to this date the figures include foreigners.

on imported food, and a certain part of the populations of Germany, France, Belgium, and Holland also live on imported food—the importations being mainly from the United States. These new countries therefore not only have permitted an increase of population in a century, till it is sixteen times the population at starting, but a much larger increase. To take the United States alone, we cannot estimate its contribution to the support of foreign populations at less than an amount equal to the support of a population of 10 millions, similar in character to that of the United Kingdom. Its exports of bread-stuffs and provisions are now about 90 million pounds annually, at the value as they leave the United States; and at £9 per head, corresponding approximately to a value in the United Kingdom of £11 per head, which is about our consumption of agricultural products per head, this would be equal to the support of 10 million persons. In other words, then, the United States, from supporting 3 millions of people a century ago, are now supporting at least 60 millions—virtually an increase of twenty times the original number. The growth of population thus becomes more astonishing than ever. Altogether there must be about 15 millions of people in Europe supported by the produce of the new countries; and adding together the populations of Canada, Australia, and the United States to this 15 millions, less a deduction for the population in these countries a century ago, there remains a total of about 70 millions of European population,* or about

* To make these figures quite exact, a correction ought to be made on account of the non-European element in the population of the United States, the coloured population in 1880 being about $6\frac{1}{2}$ millions. The coloured population in the United States, however, is brought into competition with the European, and in some degree Europeanised. It seems unnecessary, therefore, for our present purpose to make any correction.

one-fifth of the population now living in Europe, which is supported by the produce of newly opened regions. The history of Europe we may well say would have been entirely different from what it has been during the last century but for the new countries. It is difficult indeed to over-estimate the extent to which the existence of a new field for population, such as the United States presents, has dominated the recent economic history of Europe. We are so accustomed to a set of economic circumstances in which population, constantly increasing in numbers and in the capacity for food consumption per head, finds practically unlimited means of expansion, that we can hardly understand economists like Malthus who were oppressed by the only too evident limits which nature, at the time he wrote, had apparently set.

It seems impossible, however, not to see that a period in which the pressure of limits to growth and expansion may again be felt is not far off. The approach of such a period seems to me to be suggested by the figures which are on the surface, and I may perhaps be permitted to anticipate that the idea of such an approach, if it is not now, will soon become a familiar subject for speculation.

The very language in which reference has been made to the increase of population in the United States itself, viz., that the present rate of increase implies twenty-five years hence a population of 100 millions, a hundred years hence a population of 800 millions, indicates that a continuance of this rate of increase may be considered incredible. It implies future changes in the industrial power of the race which we have no warrant to anticipate. The area of the United States, exclusive of Alaska, which does not count, is 3 million square miles, and of this area there are at least 1 million square miles, if not more, which are sterile or rainless, so that cultivation, so far as we can now foresee, is

out of the question. There remain then 2 million square miles, and on this area a population of 800 millions would give 400 to the square mile—one-third as much again as the present population per square mile in the United Kingdom, twice as much per square mile as the population of the United Kingdom which is supported by the home agriculture, and more than twice as much per square mile as the present population of France. Allowing for the greater consuming power of people in the United States as compared with that of the French people, this is as much as to say that a rate of increase of population like what has been going on in the United States for a century is impossible in the next century, unless the power of the human race to extract food from the soil is enormously increased. No doubt the United States may lose in each decade that special force of addition to its rate of increase due to immigration. As its own population increases, the proportion of the area from which immigrants are drawn will diminish, and hence there is apparent reason to anticipate that the proportion of the immigration itself will diminish. But at present there is hardly a sign of change in the proportion of the immigration, and for some time to come at least no material difference seems likely from this cause in the rate of increase of the United States population. The increase of population between 1870 and 1880 was almost at as great a rate as any that has occurred. Besides, it does not follow that the diminution of the area from which immigrants are drawn should diminish the immigration itself. Other things being equal, a larger and larger share of the increasing population of older countries will emigrate, and if they do not emigrate they will have to be supported by the import of food from new countries, which comes to the same thing. Moreover, a much smaller increase in the United States than we have supposed, say to

400 millions only in a century, would presuppose practically so violent a change in existing economic conditions, that the difference between it and the more violent change which an increase of population to the larger figure would require need not be considered.

The bare statement of such figures appears to me quite enough to indicate that the present economic circumstances of the European family of nations, including the United States as an offshoot and part of the family, are not likely to continue for more than a generation or two. We are within measurable distance of very great changes. No doubt there are other new lands—in Australia, in Canada, at the Cape, and elsewhere—which will be more or less available in the future; but, singly, the United States is so much the larger field, that the influence of these other new lands need not be considered. Assuming the United States to possess only half the area of new country available for the European races, a single doubling of the population, after the United States has been filled up—the work of a generation or two—would absorb all these other new lands; their existence only postpones the date when they will all be in the position calculated for America alone at the end of a century by thirty years or so. In the course of a century, then, we may affirm that the present economic circumstances of the European races which make possible an indefinite expansion of the numbers of the people, coupled with an increase of their consuming power, will have entirely changed.

The facts appear to me so interesting, that I ask leave to add something more, though the figures I have now to give you, while easily accessible, are not quite so much on the surface, and have not been popularised. These figures relate to the actual appropriation of land for settlement, and the actual growth of population in the new and old States

respectively. What I wish to bring out is that a much larger portion of the available area of the United States has been "taken for settlement" than is commonly imagined; that in fact not only the thirteen original States and their three sub-sections have been so taken for settlement, but what are known as the Western States, exclusive of the Pacific territories, have also been taken for settlement; that the growth of rural population in this second group of States has now brought them nearly to the level of the rural population in the older States; that there is no longer much room for growth by taking up new lands in all these portions of the States; that the remaining available area is so small as to render inevitable its being taken for settlement before very long; and that from this point, probably within twenty or thirty years, the new economic circumstances I have been referring to must begin to make themselves felt.

The total area of the United States, according to the last census, exclusive of Alaska, is given as 3,025,600 square miles, of which there is a land surface of 2,970,000 square miles. Of this the portion belonging to each of the three groups named, with the quantities of each respectively taken for settlement, is as follows, the figures being worked out from the data of area and population as given by the last census :—

*Area of United States and Area taken for Settlement, in
Three Groups.*

	Total Area.	Area taken for Settlement.
GROUP I.	Square miles.	Square miles
Thirteen to sixteen original States	393,000	362,000
GROUP II.		
Twelve Western and Southern States* ..	605,000	560,000
GROUP III.		
Remaining States and Territories—		
a. Six Far West States †	620,000	370,000
b. Pacific States and Territories ‡ ..	1,407,000	277,000
Total of Group III.	2,027,000	647,000
Grand Total	3,025,000	1,569,000

* Viz., Kentucky, Tennessee, Ohio, Indiana, Illinois, Michigan, Missouri, Arkansas, Louisiana, Mississippi, Alabama, and Florida.

† Viz., Iowa, Wisconsin, Minnesota, Kansas, Nebraska, and Texas.

‡ Viz., California, Oregon, Dakota, Colorado, Nevada, Arizona, Idaho, Montana, Wyoming, Utah, New Mexico, Washington.

Thus out of the total area of 3 million odd square miles, rather more than one-half is the area taken for settlement; and the area not for settlement is almost exclusively in the last group of all. This group I have subdivided in two sections, the first comprising States like Iowa and Minnesota, more or less completely settled, and the second comprising the Pacific States and Territories; and of the first subsection it will be observed more than half is already included in the area taken for settlement. The question then arises—How much of the unsettled portion is available for settlement? and to this the answer must be, little. When I mention that Mr. Porter, a well-known American statistician, and

one of the Tariff Commission now sitting, in his book on "The West," estimates that there are 1,400,000 square miles of territory in the west, of which only a tithe will ever be available for cultivation, it will be seen that the wholly unoccupied portion of the available territory must now be reduced to very small dimensions.

The next point to which I wish to draw attention is the actual population of the first two groups, exclusive of the town population, and the proportion to the square mile. This figure I work out from the tables at pp. 26-31 of the Introduction to the Population Statistics of the United States Census:—

Net Rural Population of the United States, exclusive of the Town Population, in different Groups of States, with the Numbers per Square Mile.

	Total Population.	Town Population.	Net Rural Population.	Number per Square Mile of Rural Population.
Group I.	21,835,111	7,939,334	13,895,777	35
„ II.	19,656,666	3,614,835	16,041,831	26½
„ III. ^a	6,761,132	847,282	5,913,850	9½
„ III. ^b	1,902,874	534,659	1,368,215	1
Total of III. ..	8,664,006	1,381,941	7,282,065	—
Grand Total ..	50,155,783	12,936,110	37,219,673	72

Thus while the rural population in the thirteen original States is 35 per square mile, it amounts to no less than 26½ per square mile in twelve other States which we are accustomed to speak of as more or less unoccupied. This is

clearly not the case. An addition of $8\frac{1}{2}$ per square mile, or of little more than 5 millions in all, would make them as populous as the rural parts of the original States. Group III.a, though it has a larger area to fill up, would nevertheless become as populous per square mile rurally as the older group of States by an addition of about 15 millions of population. It appears, however, that a large part of this area belongs to the rainless region; so that probably less than two-thirds of this 15 millions would fill up the available area to the limit of the thirteen original States. There remains only the last division of all; but it would seem that the available area here cannot be put at more than 400,000 square miles, on which the present rural population would be about 3 per square mile; so that if the population grows to the limit of the older States, the addition to the population necessary would be about 10 to 12 millions only. Altogether an addition of about 20 to 25 millions to the rural population of the United States* would seem all that is required to occupy the available area in the same way that the oldest and most settled part is now occupied. When that point is reached, the present conditions of expansion must begin to change.

How long will it be till the point is reached? Some idea of this may be formed from a comparison of the increase of the total population with the increase of the city population. This is shown in a table at p. 29 of the Introduction to the Population Statistics of the Census, already referred to, from which it appears that the total population increased nearly 12 millions in the last census period, and the urban population nearly $3\frac{1}{2}$ millions, so that the rural population

* Viz., 5 millions to second group, 10 millions to Group III.a, and 10 millions to Group III.b.

increased $8\frac{1}{2}$ millions.* Of course it may be urged that the rural population may have increased in the older parts of the country as well as the new, but it is interesting to observe how much of the absolute increase of population is in the second and third groups, and not in the first. This is shown in the table on the next page, extracted from the "Introduction to the United States Census."

* The following is a copy of the figures here referred to, the urban population here accounted for, however, being somewhat less than above stated, which includes towns of a smaller size than are reckoned in this comparative table:—

Number of Total Population of United States at each Census, and Number of Urban Population, with the Proportion of the Urban to the Total.

Date.	Population of United States.	Population of Cities.	Inhabitants of Cities to each Hundred of Total Population.
1790	3,929,214	131,472	3·3
1800	5,308,483	210,873	3·9
'10	7,239,881	356,920	4·9
'20	9,633,822	475,135	4·9
'30	12,866,020	864,509	6·7
'40	17,069,453	1,453,994	8·5
'50	23,191,876	2,897,586	12·5
'60	31,443,321	5,072,256	16·1
'70	38,558,371	8,071,875	20·7
'80	50,155,783	11,318,547	22·5

*Population and Number of Inhabitants per Square Mile in each of Three Groups in the United States at the Date of each Census.**

Date.	First Group.		Second Group.		Third Group.	
	Population.	Average Density (Persons to a Square Mile).	Population.	Average Density (Persons to a Square Mile).	Population.	Average Density (Persons to a Square Mile).
1790	3,819,846	17.0	109,368	7.2	..	..
1800	4,922,070	18.5	386,413	9.8	..	..
'10	6,161,566	20.6	1,078,315	9.8	..	..
'20	7,417,432	23.8	2,216,390	11.3	..	..
'30	9,158,721	26.3	3,707,299	13.1	..	..
'40	10,638,004	30.1	6,357,392	14.5	74,057	4.7
'50	13,218,496	36.7	9,078,288	18.4	895,092	7.1
'60	15,818,547	43.8	12,637,882	24.3	2,968,892	9.5
'70	17,964,592	50.1	15,594,721	29.5	4,999,058	12.9
'80	21,835,111	60.3	19,656,666	35.1	8,664,006	13.4

Thus in the last decade about 4 millions of the total increase of population is in the second group, and 3,700,000 in the last group. At this rate, clearly, the increase of population in the second group in ten years from 1880, if all agricultural, would be such as nearly to fill up the country with a rural population to the level of the older States, while the same increase would go a very long way towards filling up the last group in the same way. But the speed with which the vacuum will be filled will probably be even greater. The population in the new regions grows at an increasing rate as regards amounts. In 1840 the population in the third group was about 74,000 only; in 1850 it had increased by rather more than 800,000; by 1860 there had

* To prevent misunderstanding, it should be noted that the figures per square mile in this table refer to the whole population, whereas in the table on p. 306, the figures relate to the rural population only.

been a further increase of 2 millions; by 1870 there had been another addition of 2 millions; and between 1870 and 1880 there is an addition of nearly 4 millions. Thus only in one decennial period, viz., between 1860 and 1870, is the increase less than about double what it had been in the previous decennial period. The increase of population in this new region at the past rate would therefore be, not 4 millions, but 8 millions, or about half what is required to fill up the region with a rural population to the level of the thirteen original States. By 1890, therefore, not only will the second group of States very probably be filled up to the level of the thirteen original States, but the work of filling up the last group of all will have advanced very nearly towards completion. In another ten years, that is by 1900, assuming the same progressive rate of increase, the addition to the population in the last group of all would be 16 millions, which would be far more than sufficient to fill up the vacuum

There is still another way of looking at the matter. During the decennial period 1870-80, the increase of population in the United States was about equally distributed between the three groups—about 4 millions to each, the increase in the first group being, however, mainly in the cities. Assuming an equal division of the 50 millions additional population which will be on the territory of the United States in twenty-five years—and it is more likely that the Western States will have a larger proportionate share—this would give 16 millions more to the second group, or 11 millions more than is necessary to fill up the rural districts to the level of the Eastern States, and 16 millions to the third group, which would suffice to fill the rural districts to the Eastern level. Even looking at the matter in this way, then, the prospect is that the available area in

the United States will be peopled up to the level of the thirteen original States, as regards the rural population, in the course of twenty-five years. But the distribution of the increase between the groups, as I have said, is likely to be unequal, and the West will probably be filled up with even greater rapidity. To look at the matter in yet another aspect: of the 50 millions additional population, assuming an increase of the town population like what has been going on in the past, about 12 millions will be a town population, leaving 38 millions as the rural increase. But unless rural population is to increase in the original States, and is also to increase in the second group to more than the present level of the original States, the whole of this 38 millions, except the 5 millions required for the growth of rural population in the second group to the level of the original States, will be left for the occupation of the available area in the third group, or double what is required. Whatever way we look at the matter then, it seems certain that in twenty-five years' time, and probably before that date, the limitation of area in the United States will be felt. There will be no longer vast tracts of virgin land for the settler. The whole available area will be peopled agriculturally, as the Eastern States are now peopled.*

All this must involve a great change in the conditions of

* These various calculations may be put more shortly still. Assuming the available area for settlement to be altogether 2 million square miles—and it seems not quite so much—this would absorb altogether, at 35 per square mile, a rural population of 70 millions. With that number the entire available area of the United States would have as thickly settled a rural population as the thirteen original States now have. But the present rural population being over 37 millions, only 33 millions more at the outside are needed to fill up the available area to the level of the Eastern States, or less than the estimated addition to the rural population at the present rate of increase in the next twenty-five years.

the growth of population and the general economic conditions of the country. It confirms in the most ample manner what was to be surmised from the bare statement of the geometric increase of population itself, pointing as it did to a population of 800 millions at the end of a century from this time. Long before that it is plain, and I think quite certainly within twenty-five years, the conditions of the expansion of population must be substantially different from what they are now.

It will be urged that it is notorious the United States can support enormous masses of population. Its available agricultural area in round figures is twelve or thirteen times that of the United Kingdom, and eight times that of France. Considering what the population of the United Kingdom or that of France is, and the superior fertility of many tracts of the United States, it appears safe enough to assume that the United States can support an indefinite increase of population, and that there is room for great expansion of population within the settled area. But assuming all this to be the case, what we may observe is that it is not quite to the present point. This is not a question of supporting a large population anyhow; *how* they are to be supported is here all important. The moment there is little new land to occupy, the conditions of expansion must change; every year must bring nearer the date when the fruits of the soil will be extracted with increasing difficulty. The agriculture must become different from what it is now. What has been already said, moreover, as to the United Kingdom and France not supporting all their own population, and as to what the position in the United States would be, even as compared with the United Kingdom and France, if the geometric increase in the United States should continue no more than a century, may show that there is, after all, no

room for an indefinite expansion of population within the settled area in the United States. I should like to go further, and suggest that the limits of such expansion, without a very great and almost inconceivable change in the agriculture itself, must be very narrow. Comparisons with European States on this head seem very apt to mislead. But the figure of 35 per square mile as the rural population of the older parts of the United States is, after all, one-fourth of the agricultural population of France per square mile; and there are two important differences between the agriculture of France and the United States:—1. The consuming power of the United States population is much greater, perhaps double that of the French population, so that the soil cannot be expected to support the same number of Americans as French. 2. The western farmer in the United States grows for export, not merely to the towns of the country, but abroad. A rural population one-fourth that of France may thus be quite sufficient to settle up the country. We must not come to the subject with European ideas as to the scale of living.

It would be foreign to my purpose to indulge in speculation as to what will be the consequences of this approach to a complete settlement of the United States, coupled with the fact that population, whether in the United Kingdom, or in Germany, or in the United States, shows no sign of abatement in the rate of increase. It is sufficient for my purpose to point out that as the existence of vast tracts of virgin soil in the United States has permitted, during the last hundred years, an expansion of the European population without a precedent in history, has made the economic history of Europe in that period entirely different from what it would otherwise have been, so now the approach to a complete settlement must profoundly affect the world. The conditions

of economic growth will be fundamentally altered. Possibly there may be chemical or other inventions rendering possible great improvements in agriculture, which will have practically the same effect as an increase of the quantity of new land available. Possibly we may have the rate of growth of population itself checked. But with the change of one condition others must change, if the masses of European people are to remain at their present level of prosperity. If there is no change, the nature of the difficulties that will arise is obvious: the masses of labourers will have to contend under increasing difficulties* against a fall in the scale of living.

But while I refrain from indulging in general speculation, I may, perhaps, be allowed to point out some of the more immediate consequences which are likely to follow from an approach to complete settlement in the United States, of which we seem to be within a measurable distance. First of all there will probably be a diversion of a larger part of the stream of emigration from Europe and the Eastern States of the American Union to the north-west provinces of Canada. Here there are probably about 400,000 square miles of territory available for settlement, equal in quality to the best land in the United States West. As there is no such field in the United States itself, the stream must apparently be to the new land. The second immediate consequence I should look for would be an increase of manufactures and of town population in the United States.† The agricultural outlet becoming less tempting, and agricultural wages tending to fall, the population will inevitably be more and more

* See 'Some Leading Principles of Political Economy Newly Expounded.' By J. E. Cairnes, M.A. Macmillan & Co., 1874. pp. 332-4.

† See *postea*, p. 340.

largely drawn into manufacturing. And a third consequence will probably be a check to the tide of emigration from older countries, a greater demand upon the agriculture of those countries, or at least a mitigation of the extreme competition it now sustains from virgin soils, and possibly a reversal of the present tendency for rents to fall. Such changes may hardly be apparent for a few years, with the exception, perhaps, of the diversion of the stream of emigration to the north-west of Canada, which has begun; but it seems hardly possible to doubt that they must begin to be felt before very long—perhaps in the course of ten, and almost certainly in the course of twenty years.

To sum up this long review. These easy figures of population evidently go to the heart of much of our politics and political economy. To quote only the illustrations I have given, we may say, first, they give some idea of the mass of the European populations in the world, and consequently of the overwhelming strength of European civilisation. Next, as we have seen, they help to explain the existence of five leading powers in Europe, and the changes in the balance of power which have occurred in the last fifty or sixty years. They equally help to explain domestic changes in each country, such as the diminished intensity of the Irish difficulty in the United Kingdom, or the growth of social difficulties in a country like Russia through the population increasing with no other opening but a restricted agriculture, or such external difficulties as we have brought on ourselves by the conquest of India and the Roman peace we have established. Finally, they set before us in a clear light the great economic phenomenon of our time, the creation of the United States of America, and the provision by this and similar agencies for a growth of population, not only in the

United States, but in Europe, which is entirely without precedent. I have endeavoured to supplement the last figures by a few others designed to throw light on the question of the continuance of this portentous growth, and the probability of a check to it; but the figures here used are also easily accessible. I trust you will agree with me that we may conclude from all this review, that the easy figures of statistics which we are all more or less familiar with are fruitful. How impossible it would be even to conceive some of the problems which are now raised for discussion if there were no statistics, and how inexplicable many of the facts of the present day and of history would become if statistics did not explain them.

If time permitted, it would not be difficult to show how other familiar figures in statistics also supply problems for discussion, and colour all our political thought. Let me only add, however, that the fact of these easy figures being so useful should encourage the development of the study of statistics. Familiar as are some of the things we have been discussing, it is often too evident that they are not sufficiently appreciated—that hazy ideas are widely held which a clear knowledge of statistics would disperse. Still more, not only should the accessible and easy figures be more studied, but it is most desirable to digest other masses of figures and increase the field of what can be readily understood. The difficulties in the way in some branches, as in the case of many trade figures, the figures of national income, and the like, are enormous, in consequence of the varying aspects of the data and the difficulty of impressing on the public mind some of the most elementary conceptions of the statistician, such as the propriety of using figures of trade on an imperfect basis to show progress or the reverse for a series of years, because the basis, though imperfect, is

throughout the same. There is no doubt, however, that with time and attention, order can be educed of what is now chaotic to the public mind, and many facts of some complexity brought to the general knowledge. We have likewise to remember that time is working with us. The influence of simple population statistics upon political thought, and in suggesting ideas which colour literature and philosophy, which has been our theme to-night, is the result of a systematic collection of statistics, which commenced only eighty years ago, and which is still extremely deficient. We may reasonably hope for more light from statistics as time passes by, and as it becomes possible to draw out comparisons over longer periods. The statisticians of the present day labour for the future, and we need not be discouraged if in many departments we have yet to wait for results. [1882.]

IX.

SOME GENERAL USES OF STATISTICAL
KNOWLEDGE.*

IN my inaugural address as President of the Society in 1882, my topic was the influence of statistics on general political ideas and in providing problems for the deliberation of statesmen and politicians—in other words, the utility of the most common figures of statistics. In addition to all their other uses, and their use in detail in testing the effect of particular pieces of legislation or solving special problems as to the rate of mortality and the like, the most common figures of statistics, it was pointed out, had their uses in illustrating and clearing up familiar problems in politics, in making, as it were, the very atmosphere of politics, from which nations could not escape, and which got about in general discussion and literature, although many politicians themselves might be ignorant of statistics and the right mode of handling them. My illustrations were also derived almost exclusively from population statistics. The vigorous growth of European and civilised races, giving them the command over the whole world in a way that no similar civilisation had command before; the displacement of political power in Europe in the present century through the growth of Germany, Russia, and

* Read at the Jubilee Meeting of the Statistical Society, June 23, 1885.

the United Kingdom, while France and Austria remained comparatively stationary; the enormous relative diminution of the hostile Irish element in the United Kingdom, mainly through the growth of population in Great Britain, and only partly through the diminution of population in Ireland; the economic problem raised in India by the rapid growth of population under the Roman peace we have established; and finally the rapid growth of population in America and English speaking colonies, coupled with the fact of the increased dependency of European nations upon foreign supplies of food, so that we are coming within measurable distance of the time when there will be no new lands wholly unoccupied over which European populations may spread,—were all referred to as making part of the political atmosphere of the time, as generating ideas which were thus derived from the most common figures of statistics, and which could hardly have been formed without those continuous official records which the principal nations have now possessed for nearly a century. In the present paper I propose to illustrate further the theme of the above address. The most common figures of statistics supply many more ideas to the political thought of the time, and in few ways, as I believe, are statistics more serviceable to society than in supplying such topics for discussion.

I propose on the present occasion to begin by referring at more length than I did in my former address to the remarkable growth of European populations in recent times, in both the respects dwelt on before, viz., the vigour of Western European civilisation implied in this growth, and the displacement of political power which has accompanied it.

For this purpose I propose to use as a starting point a table which I find in M. Moreau de Jonnes's 'Elements de

Statistique," giving the population of Europe, according to the most trustworthy authorities, just before the outbreak of the French Revolution—that is, about one hundred years ago. With this table I have compared the population of Europe as recorded at the last census of the different countries concerned, so that in fact we have a hundred year's progress in population before us. The table of M. Moreau de Jonnes is very carefully compiled, and although there were hardly such things as good censuses until the present century, the investigations which have since been made, and the scattered notices as to the population of principal countries in previous periods, all tend to show that, for the purposes of a comparison such as I now make, the table may be accepted. Even if it is a few millions out, that would hardly matter as regards a comparison extending over so long an interval. The result of this comparison is seen in detail in the accompanying table. (See next page.) It has to be considered in reading it that changes have been made by the alteration of national boundaries and the like, but the broad results are not affected by such considerations:

*Population of Europe in 1788 and at the Present Time
Compared.*

[*Note.*—The figures for 1788 are from M. Moreau de Jonnes' 'Elements de Statistique,' p. 429, *et seq.*]

[In thousands.]

1788.		Present Time.	
Sweden and Finland ..	2,560	Sweden	4,565
		Finland	2,060
Denmark and Norway	1,490	Denmark	1,969
		Norway	1,925
Russian Empire	24,000	Russian Empire and	
Poland	2,800	Poland, exclusive of	96,300
		Finland	
Great Britain and Ireland	12,000	Great Britain and Ireland	36,000
Holland	1,800	Holland	4,013
France	24,800	France	37,321
Germany	9,000	German Empire	45,234
Prussia	6,400		
Austria and Low Coun-tries	19,611	Austria Hungary ..	37,806
Switzerland	1,800	Belgium	5,520
Spain	10,500	Switzerland	2,846
Portugal	2,800	Spain	16,634
Italy	16,000	Portugal	4,160
		Italy	28,459
		Greece	1,679
Turkey and Greece ..	9,000	Bulgaria	1,998
		Servia	1,500
		Roumania	5,500
		Turkey in Europe* ..	6,000
	144,561		341,489

The most general figures are very striking. The population of Europe at the present time comes out at 341,489,000 ; but allowing for the increase in Germany and other countries since the last census, not included in the table, and for the fact that a year or two has still to elapse before the interval of one hundred years is covered, we may put the population at the present time, for the purposes of compari-

* Exclusive of Bulgaria and Bosnia.

son, at the round figure of 350 millions. The population in 1788 in like manner, which comes out at 144,561,000, may be spoken of roundly as 145,000,000. The increase has accordingly been as follows:—

	Millions.
European population at present time	350
" a hundred years ago	145
Increase	205

The population, in other words, has increased about one-and-a-half times, so that whatever Europe was a century ago in relation to countries like China and India, and the miscellaneous native populations of Africa and the American continent, then, unless these countries have changed in population in like manner, which there is no reason to believe, the preponderance of Europe in the world, if there was preponderance before, must have enormously increased. We may take it for granted, I think, that except in India, no such increase has been possible. In China, Africa, and elsewhere, the condition of the native populations is even now such that numbers must increase but slowly; they are still in the condition from which the European races themselves emerged only at the beginning of last century, and from which perhaps they had not fully emerged until about a hundred years ago, when the table begins.

The comparison does not stop here. To the increase of the population in Europe we must add the increase of European populations outside Europe, which has been on an enormous scale in the last hundred years. The whole population of the United States, Canada, the Australian Colonies, the white population at the Cape, and part of the populations of Brazil and the South American Republics, fall to be included in this increase; and if we take the European population a hundred

years ago at 150 millions, to allow for the numbers existing at that time in the United States and elsewhere, and then compare it with the present European population, both in and out of Europe, we shall probably have a comparison not far from the mark. These extra-European populations of European descent may be reckoned as follows at the present time :—

	Millions.
United States, deducting negro population* ..	55
Canada	4½
Australia	3
Cape of Good Hope	4
South American Republics and Brazil, say ..	7
Total	70

And allowing for this extra-European population, we get the following comparison :—

	Millions.
European population in Europe at present time, }	350
as above }	
" out of Europe }	70 ✓
Total	420
European population in and out of Europe in }	150
1788 }	
Increase	270

The increase on this showing is much more than one-and-a-half times ; and is nearly as much, it will be observed, as the populations of either India or China, which are by far the most important in respect of numbers of the populations outside Europe. If we take European populations as one mass, then the present total of 400 millions and upwards most assuredly gives them the preponderant position in the world.

* This is allowing for a considerable increase since last census down to 1888.

✓ Allowing for the present rate of growth, if it should only continue another century, these numbers, from being 400 millions, will grow to over 1000 millions; so that the present numbers of India and China will be enormously exceeded. Allowing indeed for the special growth in the United States, which will have a population of 800 millions in a century if there is no change in the rate of growth, and for a similar growth in English-speaking colonies, the number of 1000 millions at the end of a century as the population in Europe or of European descent will be greatly exceeded. New events may bring about an enormously larger growth of non-European population, or the European rate of increase may itself fall off; but neither of these changes will occur without a revolution in what has become the existing order, of which an extraordinary and exceptional growth of the European races seems a part. The preponderance of European races is of course further assured by the sovereignty they have established in every part of the world over other races. But it may be questioned whether the preponderance would not have been better ensured by the absolute refusal of European races to undertake such sovereignty. It is European rule which makes possible in some parts of the world a growth of other races at a rate resembling that of European races themselves, and which in the end, as in India, may raise up very difficult problems for the ruling race.

Of course questions may also be raised as to the quality of the European increase itself. The European races, as we know, are not all of the same type. Among the peoples which have increased most we have English, German, Russian, and some of the southern nations. The preponderance of Europe in the world will depend very much on which race is preponderant, and the results in the future may be very different, according as the preponderance among the increasing race itself falls to

the English and German, or to the Russian portions of the race. In the latter case clearly the increase is that of a population which assimilates the non-European races more quickly than English or German, but which is at the same time less distinctly "civilised" in the sense we understand in Western Europe. The relative growth of these different peoples in the last hundred years may be described as follows:—

Increase of English, German, Russian, and South European Peoples compared.

[In millions.]

	1788.	Present time.	Increase.
1. English, viz.: Sweden; Denmark and Norway; Great Britain and Ireland; Holland; <i>in Europe</i>	17½	50½	
Ditto, out of Europe	4½	62½	
Total	22	113	91
2. German, viz.: Germany and Austria, deducting Belgium and including Austria-Hungary at present time	35	83	48
3. Russian, <i>including Finland</i>	27½	98½	71
4. Races of South European Countries, including France, Belgium, and Switzerland, <i>in and out of Europe</i>	65½	125½	60
Grand Total	150	420	270

According to this table the increase of the English people, while the greatest in amount, is the most remarkable in every way, the numbers being now fivefold what they were a century ago; while the Russian numbers, which come next, are less than four times what they were, the German are only two-and-a-half times what they were, and the other races of Europe are only twice what they were. It has to be considered, however, that part of the so-called English increase

is really in point of blood, a German increase; the German increase beyond the seas being credited to the English race, because the two races are blended and the latter is predominant in the blend. A certain part of the Russian increase is also due to the conquest of non-European races, though not so much as is sometimes supposed; the main increase of Russian population in the last hundred years having undoubtedly been an increase of pure Russian breed, which has found room to grow by a process of internal emigration and colonisation. It remains to be seen what the relative progress will be in future. The probabilities would seem to be that as the increase of the English race with the German blend has, apart from conquest, been so exceptionally rapid, and as the circumstance of its owning a vast unoccupied area exceptionally favours the growth of that race, which is exceptionally favoured, moreover, by the possession of vast capital and enterprise permitting a special increase of non-agricultural population, then the English race in and out of Europe in another hundred years will increase more rapidly than any other parts of the European race. In another century, at the past rate of progress, looking at that progress in detail as above explained, there will be nearly 1000 millions of this race alone in the world; while the Russian race, apart from conquest, will not exceed 300 millions, and the others increasing more slowly still will lag far behind. Here again the conditions may be altered. Germany, for instance, by acquiring a territory of its own suitable for colonisation, may increase at a greater rate than in the past, while the diversion of German emigration from English colonies and the United States may diminish the rate of increase of those regions. But there is hardly time now for such a diversion to make a great difference in the eventual result. A material diversion of German emigration is hardly

possible very soon, on account of the greater attractiveness of existing settlements as compared with settlements that are wholly new, as we see with regard to the United States, which continues to be the main field for emigration, just because there is more partly settled country there than in any other quarter.

I shall have additional remarks to make on the relative progress of the different sections of the European race in connection with the question as to whether or not there has been an average increase of wealth per head among those populations that have increased so rapidly, which I propose afterwards to discuss. Meanwhile I pass on to notice one or two obvious facts as to the displacement of political power implied by the figures. The prominent facts clearly are that of the great European powers, England, Germany, and Russia have grown enormously, changing with reference to each other and with reference to the rest of Europe, while the Austrian Empire and France have grown but little in comparison.* The facts on this head are :—

* This subject is treated of above (see p. 286), on the basis of a comparison between 1815 and 1880. The figures used above are consequently different in detail from those used here, although the changes shown are all in the same direction. A difference is also made by the figures as to the population of Russia used here, including the population out of Europe (see Table on p. 328), as well as the population in Europe, which only is dwelt with in the former Table (p. 286).

Comparative Growth in Population of the Five Great European Powers, and of the rest of Europe, in a Hundred Years—1788–1885.

[The figures in the amount columns are stated in millions.]

	Population, 1788.		Population, 1885.		Increase.	
	Amount	Per Cent of Total.	Amount	Per Cent of Total.	Amount	Per Cent.
England (the United Kingdom) ..	12	8·2	36	10·4	24	200
Russia, with Poland	27	18·5	98	28·6	71	260
Germany	15	10·2	45	13·4	30	200
France	25	17·1	37	10·8	12	50
Austria	20	14·4	38	11·1	18	90
Rest of Europe ..	46	31·6	88	25·7	42	110
Total	145*	..	342*	..	197	136

* In this Table, as it is necessary to make comparisons in detail, the totals are given as in the Table on 321, and not the round figures of 350 millions as the total population of Europe at the present time and 150 millions as the population a hundred years ago which are elsewhere used.

Thus England, Russia, and Germany have all gained relatively in numbers, while the proportions of France and Austria and of the rest of Europe to the total have declined. This is not the place, nor would this be the occasion, to discuss a purely political question. It is obvious also that the question of relative power is not determined exclusively by numbers. All that need be said here is that so far as numbers are an element in such questions, the changes in Europe in the last hundred years have been immense. How far the effect of changes in numbers is modified by other causes is clearly a question which it would be important for the politicians of all countries to take note of.

The most serious qualification to be made in the table

relates perhaps to Russia. The population of 98 millions includes 14 millions of people in Asia. By parity of treatment, the non-European population of the British Empire ought, it would seem, to be included. Even if this 14 millions were deducted, however, the increase of population in European Russia would still be from about 27 to 84 millions, or more than 200 per cent., a percentage increase equal to that of England or Germany, while the amount would still be larger than in either of the two other cases.

In connection with this increase of population, I have to notice again, as I noticed before, that the progress of Italy is very marked. With a population of 28 millions and upwards, Italy is coming very nearly into the rank of the great powers, as far as numbers are concerned, and at the present rate of growth must soon approach very closely the numbers of France and Austria.

Another aspect of this change of numbers has to be noted. Two at least of the great powers—Russia and England—have more contact of a political kind with each other outside Europe than they have in Europe. It is as Asiatic powers they are related most closely in the rivalry for empire. England, generally, and to some extent Russia, have also very close relations of neighbourhood to other non-European powers. The English Empire altogether, as Mr. Gladstone long ago pointed out, is not so much a European as an inter-continental power, whose general relations throughout the world have to be studied by those concerned, and not merely its special European relations. France is another of the great powers which has also such European relations, though these are not so great relatively to French interests as those of either Russia or England. Lately, too, Germany and Italy have shown a disposition to change from specially

European into inter-continental powers. It is obvious then that international politics have become a very different thing from what they were a century or two ago. From being questions between powers in Western Europe—a small corner of the world,—and affecting an aggregate population no larger than that of one of the great powers of Europe at the present time, they have become questions of world-wide range, affecting hundreds of millions. The people of Europe have outgrown their narrow limits, and are become the peoples and powers of the world. Last century, just before the French Revolution, the rivalry between France and England in America and the East anticipated to some extent what has become the normal characteristic of the new era. All the nations of Europe are bigger, and the overflow brings them into contact outside Europe itself. It would be out of place here to discuss all the consequences of these widely extended imperial relations. They are, however, most directly connected with the predominance of the European races in the world, which has developed so greatly during the last hundred years, and which is still developing so fast. Meanwhile, as I remarked in my former paper, especially with reference to the growth of the United States, the purely European politics are dwarfed.

Before passing from this question of the displacement of political power due to changes in population, I may perhaps be allowed to note that as yet politicians on some of these questions hardly relish statistics, and are disposed to ignore them altogether. One of those I referred to in my former paper, viz., the diminution of the danger of disloyalty in Ireland by reason of the changes in the proportion of the Irish population to that of the United Kingdom, has incidentally come up for consideration in connection with the

Redistribution of Seats Bill, which is still * pending ; but politicians as yet have refused to recognise the anomaly of the Irish representation which creates so much of the political difficulty. Ireland being at the present time entitled by population to rather less than a seventh of the representation of the United Kingdom, politicians confirm it in the possession of nearly a sixth of that representation, giving it over 100 members instead of about 90 only, and instead of the 30 to which it would be entitled if it were represented in proportion to its numbers in the same way as it was represented at the time of the Union and long after. It is safe to predict that before long these and other anomalies in representation will be corrected. The figures in such matters represent facts, and it is impossible to suppose that, however unwilling politicians may be to touch problems of this sort, the fact of an artificially large representation in the Imperial Parliament being given to a portion of the United Kingdom which happens to be hostile to the rest will long be tolerated. What politicians seem to forget is that the anomaly becomes more flagrant every year by the force of the growth of population. At the census of 1871 Ireland was just about entitled to the representation it then had, on the basis of mere numbers, perhaps to rather more. At the census of 1881 it was entitled to 96 members only against the former 105. In 1884 the proper proportion was about 92 members ; in the current year it is about 90 only ; by the next census it can hardly exceed 80 ; and by the census of 1901 the proportion will be about 68. It is sometimes urged that there is no knowing beforehand how population will change. Population, it is said, may flow back to Ireland, and the growth in the United Kingdom may be arrested. It is tolerably certain, however, to any

* June, 1885.

one who cares to follow the movements of population, that such changes in the dynamics of the matter as would be implied by any sensible reflux to Ireland or arrest of the growth in the United Kingdom are most improbable,—in fact, so very improbable that action ought to be based on the assumption that they will not occur. They would imply a very sweeping economic and social revolution indeed. It would be quite safe, therefore, for Parliament to anticipate changes in population a few years ahead, and so give rather more in proportion to districts where the growth is fastest.

In any case disaffection in Ireland being only the disaffection of a palpable fraction of the whole United Kingdom, can never be the same influence that it was when Ireland contained half the population of Great Britain. It is now an easier problem in every way to deal with. There is no force in Ireland to demand separation capable of measuring itself, even by the happiest fortune, with that of the United Kingdom; and the separation of the disaffected part of Ireland, if it could be brought about, might become tolerable, like the separation of the Isle of Man and the Channel Islands, just because that disaffected part is relatively so small. These hard facts must govern the situation in whatever way politicians, for purposes of their own, or for any or no reason, adjust the representation. Still it is extremely interesting to note how shy in this instance politicians have been of statistics, though they quote statistics often enough. The want of respect for facts must be held to prove how much political education is in arrear.*

The next broad conclusion from the most common statistics which affects the ideas of the time is the enormous multi-

* The following short table shows what the proportionate representation of Ireland would be according to the numbers of the census of

plication of resources in the communities in question. These communities, which have been increasing so enormously in population, have been increasing more remarkably in wealth. It would be impossible for me to state figures on this head for the whole of Europe, but the immensity of the change can be shown by a reference to one or two figures only. Thus, for the United Kingdom, the average capital per head a century ago could hardly be put at more than £100, if so much. In 1815 the wealth of Great Britain per head was reckoned at £170 only, although great progress had been made in the interval from 1788, so that, allowing for such an increase, and for the comparative poverty of Ireland, £100 per head a century ago for the whole of the United Kingdom seems ample. This would make English capital, then, about 1200 million pounds only; whereas, according to my own calculation on the basis of the income tax figures of 1875, the capital then was £250 per head, or £8,500,000,000 altogether, an increase of seven times in less than a century. In France there has equally been a vast increase, the present capital being estimated at not far short of that of England, while a century ago it would hardly exceed 2000 millions. In the United States comparisons are thrown out by a change in the basis of the figures of the last census, but

1871 and 1881, and the probable numbers of the census of 1891 and 1901, on the basis of a representation of 660 for the whole of the United Kingdom.

				Population, in Millions.		Number of Members to Ireland.
				United Kingdom.	Ireland.	
1871	..	..	..	31·5	5·4	113
'81	..	..	..	34·9	5·1	96
'91	..	..	..	39·0	4·8	81
1901	..	..	..	43·5	4·5	68

there has certainly been an immense increase—from about £40 per head a century ago to at least £150. The capital of these three nations alone may figure out as something like 24,000 million pounds sterling. There may have been no such increase in other countries, though the increase in Germany at least must have been rapid; but we may be sure that a very great increase has taken place, perhaps least of all in Russia and the south-eastern countries of Europe, which have remained almost purely agricultural, as compared with England, France, and Germany. Hardly anywhere can there be an unimportant increase.

These figures, I may say, are not wholly in the air. They are supported by records of the acreage and production of crops, the census of the manufacturing population and of factories, the records of entries and clearances of shipping, the movements of imports and exports, the growth of banks, and similar statistics. To show only what is meant, look merely at such a fact as the production of iron in the United Kingdom. A century ago the output was estimated at 68,000 tons.* Last year it was about 8 million tons. The production of the world, which was probably a century ago as insignificant as in England, is now over 20 million tons per annum; that production being mainly the production of the European nations, or nations of European descent we have been describing, and chiefly of the most prominent—England, the United States, Germany, and France. Similarly, as regards coal, the production in England at the beginning of the century was apparently over-estimated at 10 million tons or thereabouts, and it is now over 160 million tons. The entries and clearances of shipping again have increased since the beginning of the century in the United Kingdom

* Porter's 'Progress of the Nation,' p. 270.

about fifteen times. There is no doubt, therefore, about the increase of wealth, the facts, indeed, lying on the very surface of the economic history of the last hundred years. There are hardly data to put this increase into figures, very easily; though perhaps some approximation could be arrived at with care; while the increase of nominal values, it must be remembered, would not show the real increase of the quantities of things which has occurred, and that is the material point.

Similarly, as regards income; the income of the people of the United Kingdom a century ago could hardly be put at more than 200 million pounds, against more than 1200 million pounds at the present time, a rise from £16 to £35 per head, while there have been similar changes in Germany and France, if there have not been equally great changes in Russia and other countries. Here again it has to be considered that nominal values are not everything. The range of prices is even lower than it was a century ago, so that the average real income per head must have more than doubled, if we assume that nominal values have doubled.

The fall of prices generally may perhaps be questioned; but the point is not really difficult. The facts are exactly known as regards wheat and such articles, while it is equally well known as regards all articles of manufacturing industry—the manufactures from iron and coal, and the textile manufactures especially—that the cost of production has enormously diminished.

The more interesting question remains, whether anything can be affirmed to characterise the increase of population as regards the wealth of individuals and classes. I need not say to this audience that averages do not settle everything. Theoretically it is of course possible that all this increase of

wealth in the past century may have arisen from a few rich becoming richer, the rest of the community remaining as poor as they were, so that all the vast increase of population recorded would rather be of evil than of good omen, being the increase of a proletariat which starves in sight of the ever flowing increase of wealth. Nor am I sure but that this theoretical picture is imagined to be the picture of the reality by Socialists and some politicians who would disavow the title. But has this been the real character of the increase? The answer can only be given by statisticians, and without going into it fully at present, as it would make more than a paper by itself, I propose to summarise the main heads of the evidence, which have led every statistician I know of to the conclusion that this vast increase of wealth has benefited all classes, and that the increase of population in the last hundred years, in the leading countries at least, is an increase of a population which is better off in all classes from the highest to the lowest than the smaller population one hundred years ago. Every class, except the lowest, is more numerous, and the classes corresponding to those of former times are all richer.

By the necessity of the case, in a paper like the present, I can only deal with the broadest evidence. The broadest evidence is, however, the best—at any rate on an occasion like the present; the special object being to show the uses of the most common figures of statistics, it is desirable to restrict ourselves to figures that are easily accessible, or which can be easily demonstrated, or which are even comparatively well known, though their bearing is not popularly appreciated.

The first kind of evidence is to be found in the different studies which have been made as to the earnings and wages of the masses. I may refer to my own inaugural address in

1883 on the Progress of the Working Classes ;* to the papers published by the Manchester Chamber of Commerce, and the President of the Manchester Statistical Society ; to the French official statistics of wages ; to a book like that of M. Yves Guyot, containing numerous records of wages in England, France, and the Continent, and in the United States ; and to Mr. Jeans's paper read before the Society in 1884. The evidence of all these papers is that of a general rise of money wages since the early part of the century, in few cases of less than 50 per cent., and in many of 100 per cent. When properly studied, the evidence seems to me to point to a general rise of about 100 per cent. ; the averages of one or two of the gentlemen, where a lower average seems to be brought about, not being properly deduced, because an equal weight is assigned to units which are obviously unequal. On this last point I may say I hope to produce some observations before long, as they form part of an unfinished paper which I was preparing for the Society last January, and am still proceeding with.† But whether the average rise is 50 or 100 per cent., the broad fact of a great and general rise has been arrived at by every statistical inquiry that I know of, and is indeed beyond dispute. The only question as to the condition of the masses of the community having improved thus comes to be one of general prices ; but on this head again the evidence is only too clear. The value of gold all round is as high or higher than it was fifty years ago, while silver is not much behind, the fall in silver as compared with gold being still less than 20 per cent. ; while if we go further back than fifty years, to the end of last century or the beginning of the present, prices are found to have been

* See the next essay in this volume, p. 365.

† See "Further Notes," p. 409.

generally higher than they were even fifty years ago. The direct investigations also bring out such facts as the diminished rate of general mortality and the increased consumption of the main articles of necessity and luxury which the masses consume, on all which I need not dwell, as they were the topics of my address the year before last. All I am concerned at present to show is that this direct evidence is practically unchallenged. There are questions as to the degree of improvement raised by some writers who are not accustomed to handle statistics, and who compare, for instance, the prices of some one year in a particular locality fifty years ago with the prices of some one year of the recent period, without attending to the general run of prices; but the broad fact of a great improvement is agreed to by every investigator. Such testimony is itself important in a question of evidence. The expert opinion being all one way, ought to carry some conviction to the popular mind, as it would in any other question.

The next broad fact I would refer to is the rapid increase of population itself in the last hundred years. Whatever may be thought of the doctrines of Malthus as to the increase of population being conditioned by the increase of the means of subsistence, few will dispute them in the form of an assertion that an increase of the means of subsistence is usually the accompaniment of an increase of population. There have been cases of an increase of population with barely an increase of the means of subsistence, as in Ireland before the potato famine, though it may be questioned whether even here there was not in ordinary years an increase of the means of subsistence per head, Ireland being made artificially prosperous by the Corn Laws, which gave the agricultural industry of Ireland, like that of England itself, artificial protection. But apart from special exceptions, we

are justified in saying that a vast and rapid increase of population implies an increase of the means of subsistence among the masses who increase.

Next it is plain that a very large part of the increase of population has been the increase of a population better off than before, because this increase has been largely in the United States and in English colonies, which have attracted the rudest and poorest labour from the old countries of Europe. Out of a total increase of 250 millions in the population of European descent in the last century, about one-fourth at least has been in the United States or English colonies, where the current rate of wages for rude labour is notoriously far in excess of what it is even now in Europe, and can hardly be put at less than three or four times what it was in Europe a hundred years ago. The rudest agricultural labourer in the United States receives about 20s. a week in money, besides board and lodging, which cannot be put at less than 10s. a week more. A hundred years ago, even in England, the agricultural labourer's wage was 7s. weekly, with wheat at 46s. a quarter; and even fifty years ago 11s. and 12s. a week were common* wages, with wheat as high or higher. Fifty years ago, however, there is no doubt that the English agricultural labourer was considered better off than any of his neighbours on the Continent or than Irish labourers, from all of whom the present American labourer is descended. It is certain then that the condition of the American labourer as compared with that of the European labourer a hundred years ago, represents an enormous advance in well-being. The improvement of the wages in a

* The proper phrase would perhaps be "maximum average." See "Further Notes." Masses of agricultural labourers fifty years ago got smaller sums in money than 11s. and 12s. a week.

century, measured by this standard, is fourfold and more. Those who are left behind in Europe may not have improved so much, but those who have gone, and their descendants, have improved. The ebb and flow of emigration help to prove, moreover, that perhaps a nearer adjustment has been made between American and European standards than is sometimes thought. If the adjustment were not comparatively close, emigration from the old countries would tend to be steady and continuous in good and bad years alike, instead of being, as it actually is, intermittent.

The next broad fact I would refer to is the relative increase of town population in all the great countries. Substantially this increase is beyond all question due to the higher return to labour in towns compared with the country. Other causes may co-operate, but when we find a universal effect—in France, in Germany, in the United States—we may be sure there is a common and powerful cause, which cannot but be the superior remuneration of labour in the towns, as labour, like water, goes where it is best paid. The facts as to the increase of population in England, France, and the Continent are tolerably well-known; but it is not so well-known, perhaps, how, even in the United States, the very paradise of agricultural labour, the superiority of the towns makes itself felt. In his report as Superintendent of the last Census of the United States ('Introduction to Compendium of the Tenth Census,' p. xxxi.) General Walker writes:—

"In 1790 one-thirtieth of the population of the United States lived in cities of 8,000 inhabitants and over; in 1800 one-twenty-fifth; in 1810 and also in 1820 one twentieth; in 1830 one-sixteenth; in 1840 one-twelfth; in 1850 one-eighth; in 1860 one-sixth; and in 1870 a little over one-fifth. At the last date the inhabitants of cities numbered in all 8,071,875. It is probable that not only the absolute

number, but the proportion of the total population resident in cities, will be found in 1880 to have still further increased. It will not be surprising if 12 million of persons, constituting a full quarter of the population, are living in cities of 8,000 inhabitants and over."

This was written in 1879, before the census of 1880, and the anticipations of General Walker were nearly realised. The town population in 1880, in towns of over 8,000 inhabitants, was 11,318,547, or 22·5 per cent—that is, about equidistant between a fourth and a fifth of the whole population, instead of being about a fifth only as in 1870. If smaller towns are included, the town population of the United States appears even more than a fourth, being in round figures 13 out of 50 millions.

The logic of these facts is clear. The increase of population in the United States being itself a proof of the general improvement of the masses of people of European descent, even assuming that we are only to compare the rude agricultural labour of the States with that of Europe, then if we find that the proportion of that rude labour, even in the United States, is diminishing and not increasing, that the growth of population is in the towns, we must raise still more our idea of what the average improvement of the masses has been. We ought not merely to compare the agricultural population of the present time with that of former periods, but in part we should compare town labour, which is still better paid, with country labour. As the town labour of the United States is also generally more highly paid than that of Europe, we have in this fact too another proof of the raising of the European standard. Here the adjustment between Europe and the United States is likely to be more complete than as regards rude labour, because town labour is more intelligent and mobile. In this enormous growth of town

population then, that is, of a higher class of labour, we see another proof of the magnitude of the advance of the masses. Not only is rude labour so much better off, as we see by the growth of the United States, but the proportion of that rude labour to the total is diminishing, and that of the higher classes of labour is increasing.

This last fact can be brought out still more directly. Classifications of the Census are often difficult to follow, changes being made from period to period; but in the last General Report of the Census for England and Wales, an attempt is made to throw light on this very question of the increase or decrease of "labourers," by whatever term they may be called. The result is seen in the following short table which I extract from the Report (p. 37):—

	1871. Corrected Numbers.	1881.
Agricultural labourers	962,348	870,798
General labourers	506,273	559,769
Railway navvies and platelayers	44,169	58,847
Road labourers	8,136	10,947
Total	1,520,926	1,500,361

Along with a general increase of population, therefore, between 1871 and 1881 in England and Wales, there was no increase of labourers so called. The increase in the working population, accordingly, must have been exclusively in the artisan classes, better paid than the labourers. Coupling such a fact with the increase of the town at the expense of the rural population, we have very strong additional evidence in favour of the idea of the vast improvement of the masses. The rude labour itself is better paid to the

extent of 100 per cent. or more, but there is less in proportion of that rude labour than there was.

In this connection, also, the undoubted fact of the decrease of pauperism and crime becomes important. This decrease helps to demonstrate that the lowest class of labour is diminishing, not from any descent of the labourer into the class of the residuum (an extremely improbable thing, we may remark, with the labourer's remuneration increasing), but from his ascent into a higher class. The proportion of the residuum itself, and even its absolute amount, is decreasing and not increasing, so that the lowest labourer cannot be falling into it. I cannot but express my astonishment, I may add, at the popular impression to the contrary which appears to prevail in many quarters. The old records are only too full of the violence and crime of a large class of the very poor, half mendicants, half robbers, as the statutes against masterful beggars, highway robbery, and the like, bear witness. That beggary in the old sense has all but disappeared is certain, just because the residuum of civilised societies is less than it was.

There is yet another statement to be made bearing on this point. Not only are the lowest classes of all diminishing in proportion and even in absolute amount, but it is equally certain that at the top of the scale the proportion of society receiving moderately high incomes is increasing. I may take leave on this head to refer specially to the table printed in my inaugural address on "The Progress of the Working Classes" (*postea*, p. 398), showing the increase of the number of persons at different amounts of income charged under Schedule D. The increase in incomes from £150 upwards was there shown to be from 106,637 to 320,162 between 1843 and 1880, or three times the increase of population in the interval—we are speaking of England alone—being only

from about 16 millions to $25\frac{1}{2}$ millions, or 60 per cent. The indication clearly is that a general translation of classes has been in progress—that the lowest classes of all are diminishing and the highest increasing. It is of course just probable that the average income of the intermediate classes may not have been increasing along with an increase of its numbers through its being recruited from below, but such a movement, I need hardly say, would be extremely improbable, being contrary to the direction of the movement as observed both at the bottom and the top of the scale. It is here, moreover, that the direct evidence of statistical investigators applies. It is the artisan wages, according to their accounts, that have decisively increased. In any case the average income of a society composed in an increased measure of artisans has to be compared with a society in former times in which labourers bulked more largely. The wages of the artisan may not have increased in proportion, though the direct evidence is that they have increased; but at any rate there are more artisans relatively than there were who are all much better off than the labourers, whose condition at the same time has undoubtedly improved.*

Before passing from this point I should like to supplement these figures by a reference to some statistics as to inhabited houses. There are certain difficulties in the way of comparison at distant dates; still, there was a house duty between 1812 and 1834, as there is a house duty now; and although the bases are changed, the following comparison, I believe, may be taken as approximately correct:—

* These points are more fully discussed in my "Further Notes," p. 409 *et seq.*

Comparison of Dwelling Houses and Annual Value in Great Britain in 1833 and 1880, according to the House Duty Returns.

	1833.	1880.
	No.	No.
Houses above £20 annual value	215,000	713,000
" £15 and under £20	228,000	425,000
" £10 and under £15		755,000
Houses under £10	2,252,000*	3,091,000
Total	2,695,000	4,984,000

Here the total increase of houses is between 85 and 90 per cent. as compared with an increase of population in the interval of about 80 per cent.; but the increase of houses under £10 annual value is less than 40 per cent., or about 800,000 in number altogether. On the other hand the increase in houses between £10 and £20 is no less than 952,000 in number—more than the increase of houses under £10—and the percentage of increase is over 300 per cent.; and the increase of houses above £20 annual value is about 500,000, and the percentage of increase is about 230 per cent. There has accordingly been quite a disproportionate increase of houses above £10 annual value, showing that there has been a translation of classes into houses of higher annual value. We have not the details for houses under £10, but the presumption is that while the total increase is under 40 per cent. the increase has been at the top and not at the bottom of the scale. These statistics are of course open to the argument that increase of house rent is a proof of the increased cost of living, and not a proof of better accommodation for the inhabitants; but the argument is

* This figure is arrived at by deducting the houses subject to duty from the total number of inhabited houses.

self-contradictory. The wages of labour being ultimately the main element in the cost of producing houses, the increased rent, if it is a sign of the increased cost of producing houses, becomes a proof that the wages of the builders of houses have increased—probably that they have greatly increased, seeing that in various directions labour-saving machinery has been introduced and the cost of production has thereby been diminished. On the other hand, if wages have not increased, or if they have not increased more than by the amount of the savings effected in production, then the increased house rent implies enormously improved accommodation. The latter hypothesis appears the more probable; but in either case an advance of the masses is demonstrated.* That much higher rents are paid is a proof of the rise in the scale of living. The figures fully confirm the inferences to be drawn from the increase of incomes liable under Schedule D. already referred to.

The evidence is thus cumulative. In addition to the direct evidence of statisticians who have investigated the subject, and who find a general improvement among wage earners, the masses of the community, it appears that the great facts of the time—the rapid increase of population itself; the special increase in the United States and in the colonies, where the masses are better off than the masses in Europe; the relatively greater increase of the town population; the diminution of the lowest class of labourers, coupled with an increase in the remuneration of the class and with a diminution of crime and pauperism; and the increase of the

* Much stress is laid upon competition in towns as the cause of the rise of rent; but the bulk of the houses are of course so situated that the element of ground rent counts for very little in the general problem.

workers at the top of the scale, as shown by the returns on the income tax and of house duty,—all point to the one conclusion that there has been a great increase of well-being throughout all classes of society, the numbers of the better-off classes all increasing, and of the lower classes and of the residuum diminishing. We may thus conclude that the vast increase of wealth and resources, which has undoubtedly taken place in the last century, has not been an increase for the benefit of a few, but that all classes have participated, and not least the artisan and labouring classes, the masses of the community. At least, this is true of England, France, Germany, and the United States, about which we know most. To a less degree, however, we may assume, there has likewise been an improvement in Russia and the rest of Europe. Like causes produce like effects, and these communities must all be influenced in the same direction by the general improvement in the neighbouring communities. In other words, then, the vast increase of population with which we have been dealing is an increase of population which is generally improving in well-being, the improvement in some large parts of these masses being literally immense.

It is unnecessary perhaps to do so, as no figures on the subject can be very exact, but it may be useful to endeavour to state numerically the masses of the different classes of modern society, in order to give some notion of the magnitude of the change from former times. Using the figures as to house duty already given, and allowing 7 persons per house in houses above £20, 6 persons in houses between £10 and £20, and $5\frac{1}{2}$ persons in houses under the £10 limit (so as to allow for farmhouses, &c., not included in the dwelling houses so called), we should classify the population of Great Britain in 1880 as follows :—

	Number of Houses.	Number of People.
In houses above £20	713,000	5,000,000
" " £10 and under £20 ..	1,180,000	7,000,000
" under £10	9,091,000	17,000,000
Total	4,984,000	29,000,000

Making some addition to these figures so as to include Ireland, viz., one-tenth to the population in houses above £20, one-seventh to the population in houses between £10 and £20, and nearly one-fifth to the population in houses under £10, we should get the following classification for the United Kingdom, as for the year 1880 :—

In houses above £20	5,500,000
" above £10 and under £20 ..	8,000,000
" under £10	20,500,000
Total	34,000,000

In other words, the population living in houses above £20 rent, is very nearly half the population living in the country a century ago; it is more than the population of all England, according to the best estimates, in the time of William III., and it is more than twice the estimated population of England at the beginning of the fifteenth century after the Black Death had been recovered from. In other words, there is a whole nation within the United Kingdom living in circumstances which are better than those of even the highest classes down to a quite recent period. The highest class is in fact to be counted by millions, where it was formerly counted by thousands. There are, no doubt, many grades among the people living in houses above the £20

limit, and the standard of living has been so raised that there is a new highest class—an upper ten—which is only a small percentage of the people living in houses above £20 ; but the actual comforts and surroundings of people who live in such houses are the things here in question, and in command of the means of civilisation, of real comforts and luxuries, the people in such houses undoubtedly excel the upper ten of a former time.

The class below this amounts to 8 millions, a rather larger nation—two-thirds of the whole people a hundred years ago, 50 per cent. more than the whole population of England in the time of William III., and nearly three times the population at the beginning of the fifteenth century. If we allow that the class in houses above £20 comprises, as a rule, the lower middle class, though there are certainly some artisans included, then we may say that the upper classes of artisans, and the smaller farmers and shopkeepers are generally in the houses between £10 and £20, with incomes from all sources of over £100 per annum, allowing that rent is about a seventh or eighth of the income. I cannot help thinking that these masses compare very well with the yeomen, the freeholders and farmers of former times. Many of them, in fact, in opportunities of civilisation and healthy conditions of life are on a par with all but the very highest classes in former times.

Coming to the class in houses under £10, about 20 millions in all, I should say that if we deduct about one-fourth for the lowest class of labourers and the residuum, which I consider an ample allowance, there would remain 15 millions of people whose conditions of life are still tolerably satisfactory—the inferior army of artisans and the better class of unskilled labourers. I hardly think that if we look at the cheapness of commodities and the opportunities of education,

this class can be considered much inferior to the yeoman of former times all round—certainly they are not inferior to the masses of mechanics and labourers of any former time. Of course the existence of the mass of 5 millions below is a stain upon our civilisation. The actual “residuum” may be very small, but there are still too many of the very poor. Even the very poor, however, are undoubtedly better off than the very poor of former times; and it may be doubted if they are more numerous than they were a century ago, when half the people of the United Kingdom—it must be remembered that Ireland and Scotland are included as well as England—were in that category. In the time of William III., Gregory King estimated that more than half the population of England at that time was very poor, and either wholly or semi-pauperised; although population increased, there was certainly no great improvement on this state of things down to about the time of the French Revolution.

Thus the society of modern times, taking England as a model, includes an upper class quite as numerous as the whole nation at a very recent date; a class of superior artisans, small farmers, and shopkeepers even more numerous than the first, and living in greater comfort than the so-called middle-class, the yeomen of former times, which was only a small part of the community; and a class of inferior artisans and labourers, more numerous still, occupying the place in society of the poor of a former time, the mass of the community then, but approaching the former middle-class in its conditions of living; finally, an inferior class, the smallest of all, corresponding to the very poor and the residuum of former times, but the residuum now included being very small, and much smaller in proportion than it was. Not only then have modern societies increased mightily in numbers, but the wealth has been diffused very largely.

The mass of the well-off far exceeds the whole population of very recent times.

Before coming to a conclusion, let me add one more remark by way of explaining a peculiar misapprehension of these figures as to wealth and income, which perhaps helps to account for the Socialist version of modern society as an exploiting of the poor by the rich, and the readiness with which that version is accepted. The misapprehension is not unnatural. See, it is said, how the community of England produces 1200 million pounds a year, but the "workers" only get a fraction of this sum. The notion is thereby created that the labourers, so-called, produce the whole 1200 million pounds, and that "others" consume the larger part. In actual fact, whatever may be the truth as to the division of national production among different classes, and whatever that production may be, the estimates of national income are not available for such comparisons. Income is not identical with production in the sense understood by Socialist agitators. Look only at the way it is composed. Sir Frederick Leighton, Mr. Millais, Mr. Orchardson, Mr. Alma-Tadema, and many more paint pictures. Their incomes of £2000, £5000, £10,000, and possibly in one or two instances even larger amounts go into Schedule D., and make up a part of the 1200 million pounds, which excites the envy of the Socialist. The physician's, the lawyer's, the engineer's, the architect's and other fees, all fall into the same account. The "wages of superintendence" of the capitalist who administers his own capital, often a very serious business, also make part of the same sum. It is quite manifest, then, that whether the things which these workers produce are of value or not, the people who produce them are not the proletariat, but the very people who make the return to the income tax. Other

workers, in claiming a share of that income, are claiming a share of what workers like themselves produce. Out of a total sum of 576 million pounds returned to the income tax in 1879-80, no less than 165 million pounds returned in Schedule D. as that of trades and professions was of this character—*i.e.*, it was the production of the very people who were charged, and the value of it was paid to them as wages. Similarly, the farming income returned under Schedule B. was very much of the same character, the farmers earning the 70 million pounds credited to them, not as capitalists, but largely as workers.

On these and other grounds I concluded in my address on "The Progress of the Working Classes," that the total income of capital in the United Kingdom could not be put at more than 400, out of 1200 million pounds, or one-third of the total, and I am inclined to think this sum much above the mark. In any case, in a question as between labourers and capitalists, the fact has to be kept in mind as to what the composition of the 1200 million pounds really is. The masses of workmen in no sense are the producers of that value—they may be of opinion that what they do produce should be valued at that sum, artists and other highly paid workmen having their productions valued at less; but in actual fact there is a large amount of production by workers which is not theirs.

What is perhaps still more important, the classes engaged in this highly paid production very largely exchange among themselves. The architect, or surveyor, or merchant, pays high fees to the physician or lawyer; all of them in turn pay high fees to masters and tutors for the education of their children; the capitalist who receives a high rent for his houses, in turn pays it away to the lawyers, doctors, or other professional men who live in them. It is sometimes sup-

posed that in this way income is counted twice over and more, but in strictness income is counted only once; only what we get, when we have the sum of all, is merely the addition of the sums at which the different classes of the community exchange their services with each other, and it does not follow that there is a general fund of production to which all contribute, and which can be divided. The services are now exchanged in part between small groups in society, and such exchanges, counting very largely in the aggregate, go to swell the total; but to some extent the whole thing is merely nominal—it pleases those concerned to count them for so much, and that is all. There is no corresponding “production” to be divided.

Much the same may be said of the superior class of artisans. The good things of which they obtain command by their labour are not the things which the masses of unskilled workmen produce, but the things which they and others of their own class produce. The exchanges are mutual, and the masses of inferior workmen are out of it altogether. It is probable, besides, that as the consumption of every worker approaches very nearly his production, the condition of the production itself is that the worker should have an equivalent to consume. Strictly speaking, he could not produce at all at less wages than he receives. An artist or an author requires a certain medium; the “production” of a clever engine-driver, or other superior artisan, would equally be impossible unless with a certain command of food and other commodities; their nerves and brains would be unequal to the strain.

The dream of the Socialist that there is a common fund, produced of which certain workmen do not get their fair share is thus a pure illusion. The producers, to a larger extent than is commonly supposed, are the consumers, and

the production is a function of the consumption itself. As to the share of the capitalist, I am old-fashioned enough to think that capital and property are good institutions, that a leisured class in the community, such as the saving of capital makes possible, is not a bad thing ; but apart from this, it is also quite clear that capitalists even now only earn their income by assisting the different producers, whose exchanges are principally with each other, and the toll they levy, if the return to capital is to be called a toll, is not levied on the produce of the workers who are least paid, but on the produce of those who are paid highly. It is the highly paid who use, and who can use, the most machinery, *i.e.*, the most capital, and who have themselves cost the largest sum to become efficient producers. The unskilled labourer cannot work the machines which are essential to modern production ; if left to himself he would be unable to carry on the production ; it is his misfortune, if not his fault, that he is so poorly equipped as to be able to produce so little.

The point has also been insufficiently attended to, I think, that the income of capital is largely not spent by the capitalist classes so called. The bulk of it is saved, and gives rise to the employment of labour in another way. Mr. Atkinson estimates that hardly a tenth part of the production of the United States is consumed by the owners of capital, and although the proportion in this country is perhaps larger, I doubt if it is very much larger, although the nominal income of capital reckoned by the income tax returns appears to be a third or a fourth of the total income of the country. How essential the reinvestment of capital is with a growing population need hardly be dwelt upon, and it is a proof of the compensations that are to be found in the natural order of modern society, that the very excess of private capital leads to enormous reinvestments, with

increased employment for labour, and a diminution of return to the capitalist himself.

I trust this digression will be found not out of place. It seems to follow naturally from a discussion of the general progress of European society in population and wealth. It helps us to understand, I think, the nature of the modern industrial organisation, with its vast masses of highly paid workers, many actually highly paid in absolute amount, and almost all highly paid compared with former times, and to whom the capitalist is really only a servant, though he seems to be master.

Passing now to a conclusion, the first question to ask appears to be as to the causes of this vast development of numbers and wealth in modern times. There is nothing like it in past history. England, with about $2\frac{1}{2}$ millions of population in the fourteenth century, about the time of the Black Death, had still no more than 5 millions at the end of the seventeenth century. France, which was larger and richer, was more populous, but in the two hundred years preceding the end of the seventeenth century the population only doubled. Russia, in like manner, had less than 6 millions when it begins to be noticed in the fifteenth century in European annals, and two centuries after it had only 14 millions. In other countries there was equally slow progress, down to about the end of the seventeenth century, while in the century following, although a start forward was made, the progress was slow compared with what it has since been. An increase like that of the United States, from 3 to 60 millions in a century, is altogether unexampled, and this increase, as we have seen, is only part of a larger movement. It cannot but be interesting to understand, therefore, what are the causes of this remarkable development, and in view

of the increase of population still going on, whether these causes are likely to be permanent.

There are four causes which appear all to have contributed very powerfully to the general result, and which have acted and reacted on each other.

First and foremost I would put the growth of strong central governments, covering large areas, with power to put down all minor disorders, though they were themselves, for the most part, militant governments. To some extent England began to benefit from this cause not long after the Norman Conquest, but certainly not all parts of the United Kingdom, Ireland and Scotland especially being subject to local disturbances and wars down to a very late period. In France, again, the start forward in prosperity begins with Louis XIV., who was strong enough at home while militant abroad, and who was only strong abroad because there was peace at home. Russia begins to advance rapidly again from the time of Peter the Great, that is, from about the end of the seventeenth century, the effect in Russia being doubled by the peace at home and by the strength of the Government to drive the Turks out of the rich southern provinces and so to gain these provinces for settlement. The establishment of a strong government in Prussia at the beginning of last century is also coincident with greater peace at home, although the Prussian monarchy was militant enough. There have no doubt been great wars during these hundred years, and in some parts of Europe these wars were most destructive at long intervals; the military budgets of the Great Powers have also been enormous, and have given rise to incessant complaints and apprehensions; but the internal peace appears to have compensated all the evils of militarism on a large scale, and to have given the nations time for the arts of peace.

As the view is somewhat different from the common one, I may be permitted to point out also that the period of actual war, if we take any one nation separately, and especially if we take any one country as being itself the seat of war, has been much less than is commonly supposed. To take Prussia, for instance; it would strike most people with surprise, I think, to be told that Prussia has only been in a state of war for about three years during the present century, although Prussia, now Germany, is *par excellence* the military State of Europe at the present day. Yet this is the literal fact. The Jena campaign in 1806 lasted a few months only; the campaign with the Allies only lasted about a year, from the battle of Leipsic in 1813, to the overthrow of Napoleon the year after; the Waterloo campaign was one of four days only, and the state of war had lasted but a hundred days; the Danish war in 1864 was also short; equally so the war with Austria in 1866; and finally the war with France in 1870-71, from the declaration of war in July, 1870, to the capitulation of Paris in January following, was one of hardly more than six months. The record of Austria is almost as clear of the actual state of war. One short campaign in 1800, ending in the defeat of Marengo; another short campaign in 1805, ending with Austerlitz; another campaign in 1809, ending with Wagram; a year of fighting in 1813-14; a short war with France and Italy in 1859; and finally the Danish war and the war with Prussia in 1864 and 1866—make up the Austrian account. The state of war during the present century has not lasted five years, even if we throw in the war of the Hungarian revolution in 1848-49. The Russian account is less clear, but even in the case of Russia there have not been ten years of European warfare. As regards France and England, which were engaged for an exceptionally long period in warfare, beginning after the

French Revolution, and lasting with little intermission until 1815, the peculiarity was, with the exception of a short period of invasion in France by Prussians and Austrians after the French Revolution, and another short period in 1814, that neither country was the theatre of war. Both countries were left entirely free for industrial development at home. In a certain sense Europe for quarter of a century before 1815 was involved in war, but the theatre of actual fighting was constantly shifting, and it is not true that Europe was ravaged by war the whole of that time.

The conclusion is that although it may not be true to say that the last hundred years have been more peaceful than any former period of European history, yet the constitution of strong central governments has diminished the actual area of warfare, and the actual duration of the state of war, so sensibly as to give far more time than in any former age for industrial development. I think it is possible and probable that under the new conditions, with boundaries well settled, and the Great Powers conscious of the mischief they can inflict on each other, and the little gain they can hope for in war, the limitations of the area of warfare, and of the duration of the state of war, will continue and even increase.

The next cause of the rapid improvement in population and wealth in the last hundred years appears to have been the great advance in practical agriculture which took place in the course of last century. I must speak with diffidence on such a subject; but in England at least the improvement of the breed of cattle, the introduction of root crops and winter grasses, and later on systematic and more skilled drainage, coupled with the enclosure of common and waste lands, appear to have combined to increase greatly the agricultural production of the country. Such improvements would not be confined to one country, but would of course

spread, and Continental writers accordingly record a great increase of agricultural production during the present century. Of course there could have been no such improvements without internal peace, the one cause thus co-operating with the other.

As a third cause I need only note that to last century, belongs the steam-engine and other inventions and the beginning of a vast development of manufacturing, which has since been coincident with the vast increase of population.

Finally, and not less important than any, there has come the discovery and opening out of new lands in the west of North America, in Australasia, and in South America, suitable for European colonisation, Russia having been already provided with a similar field at home, which it obtained the practical use of last century by expelling the Turks. This opening out of new and fertile land has certainly been a godsend to the European race. Coming as it did at the very time when internal peace and discoveries in arts and manufactures were stimulating the growth of population, it has provided an outlet for rude labour, which has, along with the other causes in operation, removed every external check to an increase of population and wealth. But for these new and fertile lands, it is impossible to imagine how the recent development could have taken place. A check must have come from somewhere, and the masses could not have been so well off as they are now.

Will these causes or conditions be permanent or not? So far as can be judged, three of them may be, but the last is necessarily transient. The great nations may continue peaceful; agricultural production may go on improving; the development of inventions and manufacturing may also go on almost indefinitely. So much cannot be affirmed with certainty. It remains to be seen whether the human race

has power to maintain so complex an industrial organisation, along with a steady and enormous increase of numbers, as we possess, so dependent on scientific knowledge of every kind, and making such heavy calls on brain and nerves. How can we know beforehand that the proportion of skilled labour necessary for the very existence of such a society will be maintained? But while there is a possibility so far of existing conditions being maintained, it is equally certain that the power of resorting to new lands is rapidly being lost. If population increases at all at its present rate for only another century, the habitable earth available for European races will be filled up as the existing territory they occupy is already filled up. The race accordingly will have to depend, after an interval which is very brief in human history, on the power of increasing production from the same soil, and not on the resort to new lands. So great a change must affect materially the whole conditions of the recent progress.

It is impossible not to revert in such a connection to the Malthusian theory. Malthus is thought to have been discredited because he is supposed to have asserted, writing at the beginning of the century, that the population of the world, and particularly of England, would not in fact go on increasing, as it really has done, because there would not be means of subsistence. Malthus, however, had made no prediction in the strict sense of the word. He had drawn out from experience that the human race tended to increase faster than the means of subsistence, its natural increase being in geometrical ratio, and the increase of its means of subsistence in arithmetical ratio only; so that population had only been kept down in past times by war, famine, and disease as the consequence of famine. He was bound to

anticipate that a continuance of the process would expose the race once more to the operation of these natural checks, or to a descent of the masses in the scale of living, or to both these evils. That in fact the new experience has been different from the former one, and owing to various causes the means of subsistence have increased faster than the population, even when increasing at a Malthusian rate, is no disproof surely of the teaching of Malthus. His statistical inquiries into the past remain as valuable as ever. If the causes of the new experience have been transient only, and one of them at least has been transient, while we do not know how the future will shape itself as regards the others, then it is not quite so certain even yet that the gloomy anticipations of Malthus were wholly misplaced. A struggle by large portions of the race against a fall in the scale of living may not be so far off as it appears.

In one respect at least Malthus has been confirmed by the event. Among all the illustrations he was able to give of the tendency of the human race to increase with an increase of the means of subsistence he could adduce nothing so colossal as the experience of the last hundred years. On this head he is fully justified. Here again the experience may change in time. The race may change in some vital characteristic as that of France seems to have changed, at least in France itself, for the Canadian French increase rapidly enough. Until the present time, however, the experience since Malthus is almost uniform as to the tendency of the race to increase when there is abundance of food and wealth.

Meanwhile, outside of these speculations, it is impossible not to regard these vast agglomerations of human beings under single governments from another point of view. May

they not be changing entirely the essential constitution of governments, the character of politics, and the range of political action? Not only must this question be answered in the affirmative, but the answer must be of a kind, I think, which will surprise some of our active politicians. The change that is happening is not merely that governments are becoming democratic, as the phrase is. The governments themselves are becoming powers with a limited range of action only, because the vast complexity and play of interests in modern societies place it beyond the power of the ultimate authority to interfere intelligently, except within the very narrowest limits; and because the old purposes for which governments existed—the maintenance of internal order, the punishment of crime, external war, the regulation of successions to property, the teaching of religion perhaps—are some of them falling more and more into the hands of voluntary agencies, and are partly becoming—through the ease with which they are accomplished, and for other reasons—less important relatively than they were to the general interests of the community. The mere fact, for instance, that in the United Kingdom the central government now spends annually about a twelfth or less of the national income, whereas at the beginning of the century it spent about a third, shows how much smaller a factor government is in the national life than it formerly was. At the same time crowds of interests have grown up for which there are voluntary associations answering in many respects the ends of government, but more or less wholly dissociated from the central government itself, and very little regulated by it. The public companies, the learned societies—all do things of a kind which governments were once expected to do, but which society for the most part now does for itself. Local government also has become not so much an extension of national

government as a species of voluntary association, administering for localities in certain matters, such as gas and water, just as other authorities, if I may call them so, without being thought of as part of the government at all, administer the far more important interests of the railways. As a consequence, the general interest of people in the affairs of government, and in political action, is declining, because private affairs and public and semi-public interests of a non-political kind are more engrossing. Under the changed circumstances politicians can hardly be at the top of business as they once were; they manage a department of the general organisation of the community, and not the organisation of the whole community for all common interests as was once the case. The chief interest now attaching to politics is that as politicians have power—the command of national resources—they may cause great mischief; but the time is long past since it has been in their power to do much good by what is called constructive action. The community goes its own way in trade, in science, in religion, in amusement, and hardly cares what politicians may do or not.

In essentials the form of government adapts itself to this change. Formally the nation chooses its Parliament and so its Government. Practically the choice is somewhat like the choice of leaders in other public matters—a self-choice on the part of a few who devote themselves to the business as a business, and who get to the top just as the directors of a large company get to the top, the public taking a languid interest in the matter, and allowing itself to be led. But the business of getting elected and keeping foremost is itself so arduous, just because of the vast increase of population, that any power except for mischief when they do govern is necessarily taken away from those who engage in the struggle. They have not time or strength to govern if they

would. As nations increase in numbers, these difficulties must increase, and the sphere of government must be proportionately reduced.

In conclusion, I ought perhaps to apologise for having been tempted so much into political speculation by the consideration of some of the most common facts of statistics. My excuse must be the fascination of the topics, and the hope that some good may be done to our cause by showing to the public, and especially to the younger generation, the profound importance and interest of the aspects of social and economic progress which statistics present, and which could not be perceived at all without statistics. . In the course of time, as statistical records are maintained, problems of the same kind as those here discussed must be presented for discussion with increasing clearness, and statistical ideas of society and social progress must more and more permeate the literature and philosophy of the time. [1885.]

X.

THE PROGRESS OF THE WORKING CLASSES IN
THE LAST HALF CENTURY.*

IN assembling for the labours of another session, our first duty, as it was a year ago, is to commemorate the heavy loss which the Society has sustained by death. On the last occasion the names before us were those of Mr. Newmarch and Mr. Jevons, identified for many years with our work, and intimately known to many of us. On the present occasion the loss to be recorded is of another co-worker equally distinguished, though in a different way, and perhaps possessing a more exclusively statistical reputation—Dr Farr. The *Journal* of the Society already contains a record of our sense of loss, but a few words more may surely be permitted here—in memory of one who was present year after year, not only at our inaugural meetings, but at almost all the ordinary meetings as well: who, throughout a long career, contributed numerous and valuable papers to our discussions, the interval between his first and last paper read at our meetings being over thirty years; who in the fulness of time, and certainly not before he deserved the distinction, presided over us for the usual period; and who, in fact, deserves credit as one of the makers and promoters of this

* Inaugural address as President of the Statistical Society. Delivered 20th November, 1883.

Society, and of the study which we cultivate, in the most literal sense of the words. It is a very great loss we have sustained. Happily in Dr. Farr's case we have not to lament the premature shortening of days which we had to lament in referring to the loss of Mr. Newmarch and Mr. Jevons. Dr. Farr had reached the limit of a tolerably long life, and till within a very few years of the close, had been able to take an active part in the studies to which he was devoted. There are at least two remarkable monuments of his later labours, the special report to the Registrar-General on the mortality of the 1861-71 decade, which was completed only seven or eight years ago, and his paper on the mode of estimating the value of stocks having a deferred dividend, read at one of our meetings in King's College in the year 1876, after Dr. Farr had served his term as President of the Society. We can only lament Dr. Farr's loss, therefore, as the common lot of humanity, and though we could have wished a longer life and greater service, we may rejoice that the life was not incomplete, and that Dr. Farr had time to perfect his best work. What he has left is a noble monument of industry and ingenuity, full of example to all of us who have devoted time and strength to statistics, and he is certain to be honoured, we may be sure, by future generations even more than he has been by the present. To have organised, as he did, the official records of vital statistics on a model which has been widely followed not only here but abroad, and which has done much even already to promote the health and welfare of mankind, by revealing and making evident to all some main causes of disease and mortality, is a great work for one man to have done. Politicians and members of Parliament, who are ready enough to use whatever figures come to hand as implements of political warfare, but who seldom study them, may not have been able to recognise

the work as the public did ; but the work remains, and we, at any rate, as members of the Statistical Society, are all proud of it.

I am sorry to have to add that after this address was prepared, the announcement appeared in the newspapers of the death of Lord Overstone, who was also one of the founders of this Society, and one of its most active promoters in its earlier years, and who was President in the years 1851-53. Lord Overstone had long survived the limit of the active period of life, and as we have been reminded within the last day or two, the public have very largely forgotten the services which he rendered ; but in this Society there is enough knowledge and enough interest in the economic pursuits to which Lord Overstone devoted himself, for many of us here really to possess some acquaintance with what he accomplished.

There can be no doubt that in the evidence which he gave before several Committees of the House of Commons, and in the opinions which he expressed privately to Cabinet ministers and public men on economic and more especially financial matters, upon which he was frequently consulted, Lord Overstone was able to render eminent services to the country. As a preacher of the doctrine of "hard money" he did much to settle the basis of the national currency in a difficult time, and that in a way which has left no room for change, and which has thus done not a little to steady the business of the country. There is no doubt also that it was in his capacity as a statistician very largely that he was able to render these services. He was pre-eminently one of those men who were extremely practical and careful about the facts upon which they gave their opinions. We may thus claim Lord Overstone as one of our distinguished members. I may add that of the original members of the Society there are now

very few surviving. We have others surviving, as I shall notice presently, who were members almost from the beginning, but I am speaking now literally of our formal beginning. Amongst those who will be known to you, I think, Mr. Heywood and Mr. Edwin Chadwick are to be mentioned as among the very distinguished members who were at the foundation of the Society, and who still survive to take an interest in our labours.

The mention of the names of Lord Overstone and Dr. Farr carries us back naturally enough to the origin of the Society. We are carried back to the same date by an impending event which now casts its shadow before—our approaching jubilee, which we may hope will be worthily celebrated. It is of good augury, I trust, that we commence our fiftieth session with the election of no fewer than fifty-eight new members. It seems fairly probable now that when we complete our fiftieth year we shall have the round number of one thousand members—a wonderful improvement upon the small number of fifty years ago. On such an occasion I believe the subject on which I propose to address you to-night will be not unsuitable—a review of the official statistics bearing on the progress of the working classes—the masses of the nation—in the last half century. If you go back to the early records of the Society, you will find that one of the leading objects of its founders was to obtain means by which to study the very question I have selected. Happily we have still with us, in addition to those I have named as original members, one or two honoured members associated with the early history of the Society—Dr. Guy and Sir Rawson Rawson—who will bear me out in what I have stated. I may remind you, moreover, that one of the founders of the Society was Mr. Porter, of the Board of Trade, whose special study for

years was much the same, as his well-known book, 'The Progress of the Nation,' bears witness; and that in one of the earliest publications of the Society, a volume preceding the regular issue of the *Journal*, he has left a most interesting account of what he hoped might be effected by means of statistics in studying the subject I have put before you, or the more general subject of the "Progress of the Nation." In asking you, therefore, to look for a little at what statistics tell us of the progress of the great masses of the nation, I feel that I am selecting a subject which is connected with the special history of the Society. That it happens for the moment to be attracting a considerable amount of popular attention in connection with sensational politics and sociology, with agitations for land nationalization and collectivism among pretended representatives of the working classes, is an additional reason for our not neglecting this question but it is a question to which the Society has a primary claim, and which the authors of the agitations I have referred to would have done well to study from the statistical point of view.

There are two or three ways in which statistics may throw light on such a question as I have put forward. The first and most direct is to see what records there are of the money earnings of the masses now and fifty years ago, ascertain whether they have increased or diminished, and then compare them with the rise or fall in the prices of the chief articles which the masses consume. Even such records would not give a complete answer. It is conceivable, for instance, that while earning more money, and being able to spend it to more advantage, the working classes might be no better off than formerly. There may be masses, as there are individuals, who do not know how to spend. The question

of means, however, will carry us some distance on the road to our object. We shall know that the masses must be better off unless they have deteriorated in the art of spending, a subject of separate inquiry.

In investigating such records, however, we have to recognise that the ideal mode of answering the question is not yet possible. That mode would be to draw up an account of the aggregate annual earnings of the working classes for a period about fifty years ago, and a similar account of the aggregate annual earnings of the same classes at the present time, and then compare the average per head and per family at the different dates. Having thus ascertained the increase or diminution in the amount per head at the different dates, it would be comparatively easy, though not in itself quite so easy a matter as it seems, to ascertain how much less or how much more the increased or diminished sum would buy of the chief articles of the workman's consumption. But no such account that I know of has been drawn up, except for a date about fifteen or sixteen years ago, when Mr. Dudley Baxter and Professor Leone Levi both drew up statements of great value as to aggregate earnings, statements which it would now be most desirable to compare with similar statements for the present time, if we could have them, and which will be simply invaluable to future generations. In the absence of such statements, all that can be done is to compare what appear to be the average wages of large groups of the working classes. If it is found that the changes in the money wages of such groups are in the same direction, or almost all in the same direction, then there would be sufficient reason for believing that similar changes had occurred throughout the entire mass. It would be in the highest degree improbable that precisely those changes which could not be traced were in the opposite direction. The difficulty

in the way is that in a period of fifty years in a country like England the character of the work itself changes. The people who have the same names at different times are not necessarily doing the same work. Some forms of work pass wholly away and wholly new forms come into existence. Making all allowances, however, and selecting the best comparative cases possible, some useful conclusion seems obtainable.

What I propose to do first and mainly, as regards this point, is to make use of an independent official record which we have to thank Mr. Porter for commencing. I mean the record of wages, which has been maintained for many years in the miscellaneous statistics of the United Kingdom, and which was previously commenced and carried on in the volumes of Revenue and Population Tables which Mr. Porter introduced at the Board of Trade about fifty years ago. It is curious, on looking back through these volumes, to find how difficult it is to get a continuous record. The wages in one volume are for certain districts and trades; in a subsequent volume for different districts and trades; the descriptive classifications of the workers are also constantly changing. Picking my way through the figures, however, I have to submit the following particulars of changes in money wages, between a period forty to fifty years ago—it is not possible to get the same year in all cases to start from—and a period about two years ago, which may be taken as the present time. This comparison leaves out of account the length of hours of work, which is a material point I shall notice presently.

COMPARISON OF WAGES FIFTY YEARS AGO AND AT PRESENT TIME.

[From 'Miscellaneous Statistics of the United Kingdom,' and Porter's
'Progress of the Nation.']

Occupation.	Place.	Wages Fifty Years ago, per Week.	Wages Pre- sent Time, per Week.	Increase or Decrease.	
				Amount.	Per Cent.
Carpenters . . .	Manchester .	24/-	34/-	10/-	(+) 42
" . . .	Glasgow . .	14/-	26/-	12/-	(+) 85
Bricklayers . . .	Manchester *	24/-	36/-	12/-	(+) 50
" . . .	Glasgow . .	15/-	27/-	12/-	(+) 80
Masons . . .	Manchester *	24/-	29/10	5/10	(+) 24
" . . .	Glasgow . .	14/-	23/8	9/8	(+) 69
Miners . . .	Staffordshire	2/8†	4/-†	1/4	(+) 50
Pattern weavers .	Huddersfield	16/-	25/-	9/-	(+) 55
Wool scourers . .	"	17/-	22/-	5/-	(+) 30
Mule spinners . .	"	25/6	30/-	4/6	(+) 20
Weavers . . .	"	12/-	26/-	14/-	(+) 115
Warpers and beamers	"	17/-	27/-	10/-	(+) 58
Winders and reelers.	"	6/-	11/-	5/-	(+) 83
Weavers (men) . .	Bradford .	8/3	20/6	12/3	(+) 150
Reeling and warping	" .	7/9	15/6	7/9	(+) 100
Spinning (children) .	" .	4/5	11/6	7/1	(+) 160

Thus in all cases where I have found it possible from the apparent similarity of the work to make a comparison there is an enormous apparent rise in money wages ranging from 20 and in most cases from 50 to 100 per cent., and in one or two instances more than 100 per cent.† This understates, I believe, the real extent of the change. Thus, builders' wages are given at the earlier date as so much weekly, whereas in the later returns a distinction is made between summer and winter wages, the hours of labour being less in winter, and as the wages are so much per hour, the week's wages being also less, so that it has been possible to strike a mean for the later period, while it does not appear

* 1825.

† Wages per day.

‡ The mean of the percentages of increase is over 70.

that anything more is meant at the early period than the usual weekly wage, which would be the summer wage. Without making this point, however, it is obvious that in all cases there is a very great rise.

Before passing from this point, there is another and continuous official record I would refer to. Unfortunately it does not go back for much more than thirty years. Still, as far as it goes, the evidence is in the same direction. I refer to the return of merchant seamen's wages annually issued by the Board of Trade, in what is known as the Progress of Merchant Shipping Return. From this Return may be derived the following comparison of seamen's wages :—

COMPARISON OF SEAMEN'S MONEY WAGES PER MONTH AT 1850
AND THE PRESENT TIME.

[From the 'Progress of Merchant Shipping Return.']

	1850. Sailing.	Present Time, Steam.	Increase.	
			Amount.	Per Cent.
Bristol . . .	45/-	75/-	30/-	66
Glasgow . . .	45/-	70/-	25/-	55
Liverpool (1) . . .	50/-	67/6	16/6	33
" (2) . . .	50/-	85/-	35/-	70
" (3) . . .	45/-	60/-	15/-	33
" (4) . . .	40/-	50/-	10/-	25
" (5) . . .	42/6	60/-	17/6	40
London (1) . . .	45/-	75/-	30/-	66
" (2) . . .	50/-	77/6	27/6	55
" (3) . . .	45/-	65/-	20/-	45
" (4) . . .	45/-	70/-	25/-	55
" (5) . . .	40/-	67/6	27/6	69
" (6) . . .	40/-	67/6	27/6	69

Here again, there, is an enormous rise in money wages. This return is specially subject to the observation that money wages are only part of the wages of seamen, but I assume

it is not open to dispute, that with the improvement in our shipping there has been an improvement in the food and lodging of the sailor, quite equal to the improvement in his money wage.

This question of seamen's wages, however, well illustrates the difficulty of the whole subject. Ships are not now navigated by able seamen so much as by engineers and stokers. It would seem that as a class the new men all round are paid better than the able seamen, but I should not press this point; it might well be the case that steam ships as a whole could be worked by an inferior class of labourers as compared with sailing-ships, and yet the fact that inferior labour is sufficient for this special trade would be quite consistent with the fact that the whole conditions of modern labour require more skill than the conditions fifty years ago, so that there is more labour relatively at the higher rates than used to be the case.

The comparison, except for seamen's wages, where it has only been possible to go back for about thirty years, is made between a period about fifty years ago and the present time only. It would have complicated the figures too much to introduce intermediate dates. I may state, however, that I have not been inattentive to this point, and that if we had commenced about twenty to twenty-five years ago, we should also have been able to show a very great improvement since that time, while at that date also, as compared with an earlier period, a great improvement would have been apparent. A careful and exhaustive investigation of the records of wages I have referred to, in comparison with the numbers employed in different occupations, as shown by the census reports, would in fact repay the student who has time to make it; and I trust the investigation will yet be made.

The records do not include anything relating to the

agricultural labourer, but from independent sources—I would refer especially to the Reports of the recent Royal Agricultural Commission—we may perceive how universal the rise in the wages of agricultural labourers has been, and how universal at any rate is the complaint that more money is paid for less work. Sir James Caird, in his 'Landed Interest' (p. 65), put the rise at 60 per cent. as compared with the period just before the Repeal of the Corn Laws, and there is much other evidence to the same effect. The rise in the remuneration of labour in Ireland in the last forty years is also one of the facts which has been conspicuously brought before the public of late. In no other way is it possible to account for the stationariness of rents in Ireland for a long period, notwithstanding the great rise in the prices of the cattle and dairy products which Ireland produces, and which, it has been contended, would have justified a rise of rents. The farmer and the labourer together have in fact had all the benefit of the rise in agricultural prices.

The next point to which attention must be drawn is the shortening of the hours of labour which has taken place. While the money wages have increased, as we have seen, the hours of labour have diminished. It is difficult to estimate what the extent of this diminution has been, but collecting one or two scattered notices I should be inclined to say very nearly 20 per cent. There has been at least this reduction in the textile, engineering, and house-building trades. The workman gets from 50 to 100 per cent. more money, for 20 per cent. less work; in round figures, he has gained from 70 to 120 per cent. in fifty years in money return. It is just possible of course that the workman may do as much or nearly as much in the shorter period as he did in his longer hours. Still there is the positive gain in his being less

time at his task, which many of the classes still tugging lengthily day by day at the oar would appreciate. The workman may have been wise or unwise in setting much store by shorter hours in bettering himself, but the shortening of the hours of labour is undoubtedly to be counted to the good as well as the larger money return he obtains.

We come then to the question of what the changes have been in the prices of the chief articles of the workman's consumption. It is important, to begin with, that, as regards prices of commodities generally, there seems to be little doubt things are much the same as they were forty or fifty years ago. This is the general effect of the inquiries which have been made first as to the depreciation of gold consequent on the Australian and Californian gold discoveries, and next as to the appreciation of gold which has taken place within the last twenty years, consequent on the new demands for gold which have arisen, and the falling off in the supply as compared with the period between 1850 and 1860. It would burden us too much to go into these inquiries on an occasion like the present, and therefore I only take the broad result. This is that while there was a moderate rise of prices all round between the years 1847-50, just before the new gold came on the market, and the year 1862, when Mr. Jevons published his celebrated essay, a rise not exceeding about 20 per cent., yet within the last twenty years this rise has disappeared, and prices are back to the level, or nearly to the level, of 1847-50. The conclusion is that, taking things in the mass, the sovereign goes as far as it did forty or fifty years ago, while there are many new things in existence at a low price which could not then have been bought at all. If, in the interval, the average money

earnings of the working classes have risen between 50 and 100 per cent., there must have been an enormous change for the better in the means of the working man, unless by some wonderful accident it has happened that his special articles have changed in a different way from the general run of prices.

But looking to special articles, we find that on balance prices are lower and not higher. Take wheat. It is notorious that wheat, the staff of life, has been lower on the average of late years than it was before the free trade era. Even our fair trade friends, who find it so difficult to see very plain things, were forced to allow, in that wonderful manifesto which was published in the 'Times' some weeks back, that wheat is about 5s. a quarter cheaper on the average than it was. The facts, however, deserve still more careful statement to enable us to realise the state of things fifty years ago and at the present time. The fair trade statement, if I remember rightly, showed an average fall of 5s. in the price of wheat, comparing the whole period since the Repeal of the Corn Laws with a long period before. This may have been right or wrong for the purpose in hand, but for our present purpose, which is to compare the present period with that of half a century ago, it is important to note that it is mainly within the last ten years the steadily low price of wheat has been established. Comparing the ten years before 1846 with the last ten years, what we find is that while the average price of wheat in 1837-46 was 58s. 7d., it was 48s. 9d. only in the last ten years—a reduction not of 5s. merely, but 10s. The truth is, the Repeal of the Corn Laws was not followed by an *immediate* decline of wheat on the average. The failure of the potato crop, the Crimean War, and the depreciation of gold, all contributed to maintain the price, notwithstanding free trade, down to

1862. Since then steadily lower prices have ruled; and when we compare the present time with a half century ago, or any earlier part of the century, these facts should be remembered.

There is a still more important consideration. Averages are very good for certain purposes, but we all know in this place that a good deal sometimes turns upon the composition of the average,—upon whether it is made up of great extremes, or whether the individual elements depart very little from the average. This is specially an important matter in a question of the price of food. The average of a necessary of life over a long period of years may be moderate, but if in some years the actual price is double what it is in other years, the fact of the average will in no way save from starvation at certain periods the workman who may have a difficulty in making both ends meet in the best of times. What we find then is that fifty years ago the extremes were disastrous compared with what they are at the present time. In 1836 we find wheat touching 36s.; in 1838, 1839, 1840, and in 1841, we find it touching 78s. 4d., 81s. 6d., 72s. 10d., and 76s. 1d.; in all cases double the price of the lowest year, and nearly double the “average” of the decade; and in 1847 the price of 102s. 5d., or three times the price of the lowest period, is touched. If we go back earlier we find still more startling extremes. We have such figures as 106s. 5d. in 1810; 126s. 6d. in 1812; 109s. 9d. in 1813, and 96s. 11d. in 1817; these figures being not merely the extremes touched, but the actual averages for the whole year. No doubt in the early part of the century the over-issue of inconvertible paper accounts for part of the nominal prices, but it accounts for a very small part. What we have to consider then is, that fifty years ago the working man with wages, on the average, about half, or not much more than half what they

are now, had at times to contend with a fluctuation in the price of bread which implied sheer starvation. Periodic starvation was, in fact, the condition of the masses of working men throughout the kingdom fifty years ago, and the references to the subject in the economic literature of the time are most instructive. M. Quetelet, in his well-known great book, points to the obvious connection between the high price of bread following the bad harvest of 1816, and the excessive rate of mortality which followed. To this day you will find tables in the Registrar-General's returns which descend from a time when a distinct connection between these high prices of bread and excessive rates of mortality was traced. But within the last twenty years what do we find? Wheat has not been, on the average, for a whole year so high as 70s., the highest averages for any year being 64s. 5*d.* in 1867, and 63s. 9*d.* in 1868; while the highest average of the last ten years alone is 58s. 8*d.* in 1873; that is, only about 10s. above the average of the whole period. In the twenty years, moreover, the highest price touched at any period was just over 70s., viz., 70s. 5*d.*, in 1867, and 74s. 7*d.* in 1868; while in the last ten years the figure of 70s. was not even touched, the nearest approach to it being 68s. 9*d.* in 1877. Thus of late years there has been a steadily low price, which must have been an immense boon to the masses, and especially to the poorest. The rise of money wages has been such, I believe, that working men for the most part could have contended with extreme fluctuations in the price of bread better than they did fifty years ago. But they have not had the fluctuations to contend with.

It would be useless to go through other articles with the same detail. Wheat had quite a special importance fifty years ago, and the fact that it no longer has the same importance—that we have ceased to think of it as people did

fifty years ago—is itself significant. Still, taking one or two other articles, we find, on the whole, a decline:—

PRICES OF VARIOUS ARTICLES ABOUT FIFTY YEARS AGO
AND AT PRESENT TIME.

	1839-40.	Present Time.
	s. d.	s. d.
Sugar . . . per cwt.	68 8*	21 9†
Cotton cloth exported . per yard	- 5 ³ / ₈	- 3 ¹ / ₄
	(1840.)	(1882.)
Inferior beasts . . . per 8 lbs.	3 1	4 3 ¹ / ₄
Second class . . . "	3 6	4 9 ¹ / ₄
Third " . . . "	3 11 ³ / ₄	5 7 ¹ / ₂
Inferior sheep . . . "	3 5	5 7
Second class . . . "	3 10 ¹ / ₄	6 1 ¹ / ₄
Large hogs. . . . "	4 3 ¹ / ₂	4 6

I should have liked a longer list of articles, but the difficulty of comparison is very serious. It may be stated broadly, however, that while sugar and such articles have declined largely in price, and while clothing is also cheaper, the only article interesting the workman much which has increased in price is meat, the increase here being considerable. The "only" it may be supposed covers a great deal. The truth is, however, that meat fifty years ago was not an article of the workman's diet as it has since become. He had little more concern with its price than with the price of diamonds. The kind of meat which was mainly accessible to the workman fifty years ago, viz., bacon, has not, it will be seen, increased sensibly in price.

* Porter's 'Progress of the Nation,' p. 543. In the paper as read to the Society I gave the price without the duty, but including the duty the price was what is now given here. The average price with the duty of the ten years ending 1840 was 58s. 4d.

† Average price of raw sugar imported.

Only one question remains. Various commodities, it may be admitted, have fallen in price, but house rent, it is said, has gone up. We have heard a good deal lately of the high prices of rooms in the slums. When we take things in the mass, however, we find that however much some workmen may suffer, house rent in the aggregate cannot have gone up in a way to neutralise to any serious extent the great rise in the money wages of the workman. It appears that in 1834 when the house duty, which had existed up to that date was abolished, the annual value of dwelling houses charged to duty was £12,603,000, the duty being levied on all houses above £10 rental in Great Britain. In 1881-82 the annual value of dwelling houses charged to duty, the duty being levied on houses above £20 only, was £39,845,000, while the value of the houses between £10 and £20 was £17,040,000, making a total of £56,885,000, or between four and five times the total of fifty years ago. Population, however, in Great Britain has increased from about 16½ millions in 1831, to nearly 30 millions in 1881, or nearly 100 per cent. Allowing for this, the increase in value would be about 32 million pounds, on a total of about 25 million pounds, which may be considered the increased rent which householders above £10 have to pay—the increase being about 130 per cent. Assuming that houses under £10 have increased in proportion, it may be considered that house rents are now 1½ times more than they were fifty years ago. In other words, a workman who paid £3 a year fifty years ago, would now pay £7 10s. Even, however, if rent were a fourth part of the workman's earnings fifty years ago, he would still be much better off at the present time than he was. His whole wages have doubled, while the prices of no part of his necessary consumption, except rent, as we have seen, have increased—on the contrary, they have rather diminished. Say then that the rent, which

was a fourth part of his expenditure, has increased $1\frac{1}{2}$ times, while his whole wage has doubled, the account, on a wage of 20s. fifty years ago, and 40s. now, would stand:—

	Fifty Years ago.	Present Time.
	s. d.	s. d.
Wage	20 0	40 0
Deduct for rent	5 0	12 6
Balance for other purposes .	15 0	27 6

—showing still an enormous improvement in the workman's condition.

It may be pointed out, however, that houses are undoubtedly of better value all round than they were fifty years ago. More rent is paid because more capital is in the houses, and they are better houses. It appears also that fifty years ago there were far more exemptions than there are now, rural dwellings particularly being favoured as regards exemption. The increase of rent for the same accommodation, there is consequently reason to believe, has not been nearly so great as these figures would appear to show. It has further to be considered that the whole annual value of the dwelling houses under £10 even now is £17,885,000 only, the number of houses being 3,124,000. This must be a very small proportion of the aggregate earnings of those portions of the working classes who live in houses under £10 rent, and even adding to it the value of all the houses up to £20, which would bring up the total to £34,925,000, the proportion would still be very small. On the five million families at least of the working classes in Great Britain, the sum would come to about £7 per family, which

could not be the main part of an average working man's expenditure.*

We return then to the conclusion that the increase of the money wages of the working man in the last fifty years corresponds to a real gain. While his wages have advanced, most articles he consumes have rather diminished in price, the change in wheat being especially remarkable, and significant of a complete revolution in the condition of the masses. The increased price in the case of one or two articles—particularly meat and house rent—is insufficient to neutralise the general advantages which the workman has gained. Meat formerly was a very small part of his consumption, and allowing to house rent a much larger share of his expenditure than it actually bore, the increase in amount would still leave the workman out of his increased wage a larger margin than he had before for miscellaneous expenditure. There is reason to believe also that the houses are better, and that the increased house-rent is merely the higher price for a superior article which the workman can afford.

It has to be added to all this that while the cost of government has been greatly diminished to the working man, he gets more from the government expenditure than he formerly did. It would not do to count things twice over, and as the benefit to the working man of diminished taxes has already been allowed for in the lower

* It may be convenient to note here that the figures as to dwelling houses which I have made use of are those relating to the Inhabited House Duty. The figures as to houses in the income tax returns include shops and factories as well as dwelling houses, and are not available in a question of house-rent. I have also omitted the question of rates. The rates per pound, however, have not increased as compared with what they were formerly, and it would make no material difference if they were to be included. The workman's payment for rates and rent together cannot have increased more than is here stated for rent.

prices of wheat and sugar, we need say nothing more on this head. But few people seem to be aware how, simultaneously with this reduction of the cost of government, there has been an increase of the expenditure of the government for miscellaneous civil purposes, of all of which the workman gets the benefit. It may be stated broadly that nearly 15 million pounds of the expenditure of the central government for education, for the post office, for inspection of factories, and for the miscellaneous purposes of civil government, is entirely new as compared with fifty years ago. So far as the expenditure is beneficial, the masses get something they did not get before at all. It is the same even more markedly with local government. In Great Britain, the annual outlay is now about 60 million pounds, as compared with 20 million pounds fifty years ago. This 20 million pounds was mainly for poor relief and other old burdens. Now the poor relief and other old burdens are much the same, but the total is swollen by a vast expenditure for sanitary, educational, and similar purposes, of all of which the masses of the population get the benefit. To a great deal of this expenditure we may attach the highest value. It does not give bread or clothing to the working man, but it all helps to make life sweeter and better, and to open out careers even to the poorest. The value of the free library, for instance, in a large city, is simply incalculable. All this outlay the workman has now the benefit of as he had not fifty years ago. To repeat the words I have already used, he pays less taxes, and he gets more—much more—from the Government.*

* With regard to this question of prices, I have been favoured since the delivery of this address with the copy of a letter, dated 11th June, 1881, addressed by Mr. Charles Hawkins, of 27 Savile Row, to the editor of the *Daily News* on the cost *per patient* of the expenditure of St. George's Hospital in 1830 and 1880. The facts

As already anticipated, however, the conclusion thus arrived at only carries us part of the way. Assuming it to have been shown that the masses have more money than

stated confirm in an interesting way what is here said as to the cost of articles of the workman's consumption fifty years ago and at the present time. Mr. Hawkins, who was at one time one of the treasurers of the hospital, and therefore speaks with authority, gives the following table and notes:—

“Although each patient costs now 1s. 1d. less than in 1830, there have been great alterations in the different items of expenditure, viz.:—

	Cost per Patient.			
	1830.		1880.	
	s.	d.	s.	d.
Meat	18	4	22	2
Bread and flour	10	7	4	1
Wine and spirits	—	10	3	3
Malt liquor	5	5	2	6
Milk	6	2	5	11
Tea and grocery	3	10	3	5
Drugs	16	5	7	11
Coals and wood	10	6	3	10
Laundry	2	10	4	10
Instruments & surgical appliances	1	9	5	2
Staff;—officers, servants, nurses .	20	3	34	3

“Had wheat cost in 1880 what it did in 1830, £1884 must have been spent in bread and flour instead of £738. The cost of port wine in 1830 was £72 per pipe; in 1880 £45. In 1830 many of the patients provided themselves with tea and sugar. Under the head ‘Drugs’ is included the cost of leeches; in 1846, 14,800 leeches were used, at a cost of £143; in 1880 only 425, costing £1 16s. In 1833 another hospital, treating double the number of patients, used 48,900 leeches, but in 1880 only 250.

“These items show the great advantage of the reduction of price in some articles of diet, and the great extra expenditure now necessary for the treatment of hospital patients, depending on the greater call for additional “staff,” more especially for nursing, and an altered mode of treatment of accidents and operations, as also the greater amount of stimulants now exhibited, &c.”

they had fifty years ago, and that the prices of the chief articles they consume are cheaper rather than dearer, the question remains whether the condition of the masses has in fact been improved. This can only be shown indirectly by statistics of different kinds, which justify conclusions as to the condition of the people to whom they apply. To such statistics I propose now to draw your attention for a moment. I need hardly say that any evidence they contain as to the condition of the people having actually improved corroborates what has been already said as to their having had the means of improvement in their hands. The evidence is cumulative, a point of material importance in all such inquiries.

The first and the most important statistics on this head are those relating to the length of life among the masses of the nation. Do the people live longer than they did? Here I need not detain you. A very effective answer was supplied last session by Mr. Humphreys, in his able paper on "The Recent Decline in the English Death Rate."* Mr. Humphreys there showed conclusively that the decline in the death-rate in the last five years, 1876-80, as compared with the rates on which Dr. Farr's English Life Table was based—rates obtained in the years 1838-54—amounted to from 28 to 32 per cent. in males at each quinquennium of the twenty years 5-25, and in females at each quinquennium from 5-35 to between 24 and 35 per cent.; and that the effect of this decline in the death-rate is to raise the mean duration of life among males from 39.9 to 41.9 years, a gain of 2 years in the average duration of life, and among females from 41.9 to 45.3 years, a gain of nearly $3\frac{1}{2}$ years in the average duration of life. Mr. Humphreys also showed that by far the larger proportion of the increased duration of human life in England is lived at

* See Statistical Society's *Journal*, vol. xlv., p. 195, &c

useful ages, and not at the dependent ages of either childhood or old age. This little statement is absolutely conclusive on the subject; but we are apt to overlook how much the figures mean. No such change could take place without a great increase in the vitality of the people. Not only have fewer died, but the masses who have lived must have been healthier, and have suffered less from sickness than they did. Though no statistics are available on this point, we must assume that like causes produce like effects; and if the weaker, who would otherwise have died, have been able to survive, the strong must also have been better than they would otherwise have been. From the nature of the figures, also, the improvement must have been among the masses, and not among a select class whose figures throw up the average. The figures to be affected relate to such large masses of population, that so great a change in the average could not have occurred if only a small percentage of the population had improved in health.

I should like also to point out that the improvement in health actually recorded obviously relates to a transition stage. Many of the improvements in the condition of the working classes have only taken place quite recently. They have not, therefore, affected all through their existence any but the youngest lives. When the improvements have been in existence for a longer period, so that the lives of all who are living must have been affected from birth by the changed conditions, we may infer that even a greater gain in the mean duration of life will be shown. As it is, the gain is enormous. Whether it is due to better and more abundant food and clothing, to better sanitation, to better knowledge of medicine, or to these and other causes combined, the improvement has beyond all question taken place.

✓ The next figures I shall refer to are those well-known ones

relating to the consumption of the articles which the masses consume. I copy merely the figures in the Statistical Abstract for the years 1840 and 1881 :—

QUANTITIES OF THE PRINCIPAL IMPORTED AND EXCISABLE ARTICLES
RETAINED FOR HOME CONSUMPTION, PER HEAD OF THE TOTAL
POPULATION OF THE UNITED KINGDOM.

	1840.	1881.
Bacon and hams . . . lbs.	0·01	13·93
Butter "	1·05	6·36
Cheese "	0·92	5·77
Currants and raisins . . . "	1·45	4·34
Eggs No.	3·63	21·65
Potatoes lbs.	0·01	12·85
Rice "	0·90	16·32
Cocoa "	0·08	0·31
Coffee "	1·08	0·89
Corn, wheat, and wheat flour . . "	42·47	216·92
Raw sugar "	15·20	58·92
Refined sugar "	nil	8·44
Tea "	1·22	4·58
Tobacco "	0·86	1·41
Wine galls.	0·25	0·45
Spirits "	0·97	1·08
Malt bshls.	1·59	1·91*

This wonderful table may speak for itself. It is an obvious criticism that many of the articles are also articles of home production so that the increase does not show the real increase of the consumption of the whole population per head. Assuming a stationary production at home, the increased consumption per head cannot be so much as is here stated for the imported article only. There are other articles, however, such as rice, tea, sugar, coffee, tobacco, spirits, wine and malt, which are either wholly imported, or where we have the excisable figures as well, and they all—with the one exception of coffee—tell a clear tale. The increase in

* Year 1878.

tea and sugar appears especially significant, the consumption per head now being four times in round figures what it was forty years ago. There could be no better evidence of diffused material well-being among the masses. The articles are not such that the increased consumption by the rich could have made much difference. It is the consumption emphatically of the mass which is here in question.

As regards the articles imported, which are also articles of home production, it has, moreover, to be noted that in several of them, bacon and hams, cheese and butter, the increase is practically from nothing to a very respectable figure. The import of bacon and hams alone is itself nearly equal to the estimated consumption among the working classes 50 years ago, who consumed no other meat.

The only other figures I shall mention are those relating to education, pauperism, crime, and savings banks. But I need not detain you here. The figures are so well known that I must almost apologise for repeating them. I only insert them to round off the statement.

As to education, we have practically only figures going back thirty years. In 1851, in England, the children in average attendance at schools aided by parliamentary grants numbered 239,000, and in Scotland 32,000; in 1881 the figures were 2,863,000 and 410,000. If anything is to be allowed at all in favour of parliamentary grants as raising the character of education, such a change of numbers is most significant. The children of the masses are, in fact, now obtaining a good education all round, while fifty years ago the masses had either no education at all or a comparatively poor one. Dropping statistics for the moment, I should like to give my own testimony to an observed fact of social life—that there is nothing so striking or so satisfactory to those who can carry their memories back nearly forty years, as to

observe the superiority of the education of the masses at the present time to what it was then. I suppose the most advanced common education forty or fifty years ago was in Scotland, but the superiority of the common school system there at the present day to what it was forty years ago is immense. If Scotland has gained so much, what must it have been in England where there was no national system fifty years ago at all? Thus at the present day not only do we get all children into schools, or nearly all, but the education for the increased numbers is better than that which the fortunate few alone obtained before.

Next as to crime, the facts to note are that rather more than forty years ago, with a population little more than half what it is now, the number of criminal offenders committed for trial (1839) was 54,000: in England alone 24,000. Now the corresponding figures are, United Kingdom 22,000, and England 15,000; fewer criminals by a great deal in a much larger population. Of course the figures are open to the observation that changes in legislation providing for the summary trial of offences that formerly went to the assizes may have had some effect. But the figures show so great and gradual a change, that there is ample margin for the results of legislative changes, without altering the inference that there is less serious crime now in the population than there was fifty years ago. Thus an improvement as regards crime corresponds to the better education and well-being of the masses.

Next as regards pauperism; here again the figures are so imperfect that we cannot go back quite fifty years. It is matter of history, however, that pauperism was nearly breaking down the country half-a-century ago. The expenditure on poor relief early in the century and down to 1830-31 was nearly as great at times as it is now. With half the population in the country that there now is, the burden of the

poor was the same. Since 1849, however, we have continuous figures, and from these we know that, with a constantly increasing population, there is an absolute decline in the amount of pauperism. The earliest and latest figures are :—

PAUPERS IN RECEIPT OF RELIEF IN THE UNDERMENTIONED YEARS
AT GIVEN DATES.

	1849.	1881.
England . . .	934,000	803,000
Scotland . . .	122,000*	102,000
Ireland . . .	620,000	109,000
United Kingdom .	1,676,000	1,014,000

Thus in each of the three divisions of the United Kingdom there is a material decline, and most of all in Ireland, the magnitude of the decline there being no doubt due to the fact that the figures are for a period just after the great famine. But how remote we seem to be from those days of famine !

6 Last of all we come to the figures of savings banks. A fifty years' comparison gives the following results for the whole kingdom :

	1831.	1881.
Number of depositors .	429,000	4,140,000
Amount of deposits .	£13,719,000	£80,334,000
„ per depositor .	£32	£19

An increase of ten-fold in the number of depositors, and of five-fold and more in the amounts of deposits ! It seems obvious from these figures that the habit and means of saving have become widely diffused in these fifty years.

* 1859.

The change is of course in part due to a mere change in the facilities offered for obtaining deposits; but allowing ample margin for the effect of increased facilities, we have still before us evidence of more saving among the masses.

There is yet one other set of statistics I should like to notice in this connection, those relating to the progress of industrial and provident co-operative societies in England and Wales. These I abstract from the special appendix to the 'Co-operative Wholesale Society's Annual Almanac and Diary' for the present year (pp. 81 and 82). Unfortunately the figures only go back to 1862, but the growth up to 1862 appears to have been very small. Now, however, most material advance is shown :—

	1862.	1881.
Number of members .	90,000	525,000
<i>Capital—</i>	£	£
Share	428,000	5,881,000
Loan	55,000	1,267,000
Sales	2,333,000	20,901,000
Net profit . . .	165,000	1,617,000

Such figures are still small compared with what we should like to see them, but they at least indicate progress among the working classes, and not retrogression or standing still.

To conclude this part of the evidence, we find undoubtedly that in longer life, in increased consumption of the chief commodities they use, in better education, in greater freedom from crime and pauperism, and in increased savings, the masses of the people are better, immensely better, than they were fifty years ago. This is quite consistent with the fact, which we all lament, that there is a residuum, still unimproved, but apparently a smaller residuum both in pro-

portion to the population and absolutely, than was the case fifty years ago; and with the fact that the improvement, measured even by a low ideal, is far too small. No one can contemplate the condition of the masses of the people without desiring something like a revolution for the better. Still, the fact of progress in the last fifty years—progress which is really enormous when a comparison is made with the former state of things—must be recognised. Discontent with the present must not make us forget that things have been so much worse.

But the question is raised: Have the working classes gained in proportion with others by the development of material wealth during the last fifty years? The question is not one which would naturally excite much interest among those who would answer the primary question as to whether the working classes have gained or not, as I have done, in the affirmative. Where all are getting on, it does not seem very practical in those who are getting on slowly to grudge the quicker advance of others. Usually those who put the question have some vague idea that the capitalist classes, as they are called, secure for themselves all the benefits of the modern advance in wealth; the rich, it is said, are becoming richer, and the poor are becoming poorer. It will be convenient then to examine the additional question specifically. If the answer agrees with what has already been advanced, then, as nobody doubts that material wealth has increased, all will be forced to admit that the working classes have had a fair share.

At first sight it would appear that the enormous figures, of the increase of capital, which belong, it is assumed, to the capitalist classes, are inconsistent with the notion of the non-capitalist classes having had a fair share. In the paper

which I read to the Society four years ago, on "The Recent Accumulations of Capital in the United Kingdom," the conclusion at which I arrived was that in the ten years, 1865-75, there had been an increase of 40 per cent. in the capital of the nation, and 27 per cent. in the amount of capital per head, that is, allowing for the increase of population. Going back to 1843, which is as far as we can go back with the income tax returns, we also find that since then the gross assessment, allowing for the income from Ireland not then included in the returns, has increased from 280 million pounds to 577 million pounds, or more than 100 per cent. in less than fifty years. Assuming capital to have increased in proportion, it is not to be wondered at that the impression of a group of people called the capitalist classes getting richer and richer while the mass remain poor or become poorer, should be entertained. Allowing for the increase of population, the growth of capital and income-tax income are really much smaller than the growth of the money income of the working classes, which we have found to be something like 50 to 100 per cent. and more per head in fifty years, but the impression to the contrary undoubtedly exists, and is very natural.

The error is partly in supposing that the capitalist classes remain the same in number. This is not the case; and I have two pieces of statistics to refer to which seem to show that the capitalist classes are far from stationary, and that they receive recruits from period to period—in other words, that wealth, in certain directions, is becoming more diffused, although it may not be diffusing itself as we should wish.

The first evidence I refer to is that of the Probate Duty returns. Through the kindness of the Commissioners of Inland Revenue, I am able to put before you a statement of the number of probates granted in 1881, and of the amounts

of property "proved," with which we may compare similar figures published by Mr. Porter in his 'Progress of the Nation' for 1838. I am sorry to say Mr. Porter's figures for 1838 are far more detailed than those I am able to give; a more minute comparison would be most instructive; but I was unfortunately too late in applying to the Commissioners of Inland Revenue for the details, which I found they were most willing to give. However, the statement they supplied to me, and the comparison which can thus be made, seem most instructive. They are as follows:—

STATEMENT OF NUMBER OF PROBATES GRANTED IN 1882, WITH AMOUNTS OF PROPERTY PROVED, AND AVERAGE PER PROBATE [from figures supplied by the Commissioners of Inland Revenue]; AND COMPARISON WITH A SIMILAR STATEMENT FOR 1838. [From Porter's 'Progress of the Nation,' p. 600, *et seq.*]

	Number of Probates.		Amount of Property.		Amount of Property per Estate.	
	1882.	1838.	1882.	1838.	1882.	1838.
			£	£	£	£
England . . .	45,555	21,900	118,120,961	47,604,755	2,600	2,170
Scotland . . .	5,221	1,272	13,695,314	2,817,260	2,600	2,200
Ireland . . .	4,583	2,196	8,544,579	4,465,240	1,900	2,000
United Kingdom	55,359	25,368	140,360,854	54,887,255	2,500	2,160

Thus, in spite of the enormous increase of property passing at death, amounting to over 150 per cent., which is more than the increase in the income-tax income, the amount of property per estate has not sensibly increased. The increase of the number of estates is more than double, and greater therefore than the increase of population, but the increase of capital per head of the capitalist classes in England only 19 per cent., and in the United Kingdom only 15 per cent.

Curiously enough, I may state, it is hardly correct to speak of the capitalist classes as holding this property, as the figures include a small percentage of insolvent estates ; but allowing all the property to belong to the capitalist classes, still we have the fact that those classes are themselves increasing. They may be only a minority of the nation, though I think a considerable minority, as 55,000 estates passing in a year represent from 1,500,000 to 2,000,000 persons as possessing property subject to probate duty ; and these figures, it must be remembered, do not include real property at all. Still, small or large as the minority may be, the fact we have before us is that in the last fifty years it has been an increasing minority, and a minority increasing at a greater rate than the increase of general population. Wealth, to a certain extent, is more diffused than it was.

If I had been able to obtain more details, it would have been possible to specify the different sizes of estates and the different percentages of increase, from which it would not only have appeared whether the owners of personal property were increasing in number, but whether the very rich were adding to their wealth more than the moderately rich, or *vice versâ*. But it is something to know at least that there are more owners. I trust the Commissioners of Inland Revenue will see their way in their next report to give more details on this very interesting point.*

Before passing on I should like to add a caution which may not be necessary in this room, but which may be needed outside. All such figures must be taken with a good deal of

* It appears that the increase in the number of probates for less than £1000 is from 18,490 to 41,278, or about 120 per cent., the average value per probate being much the same ; while the increase of the number of probates for more than £1000 is from 6878 to 12,629, or over 80 per cent., and the average value per probate has increased from £7150 to £9200.

qualification, owing to variations of detail in the method of levying the duty at different times, variations in the character of the administration, and the like causes. I notice, for instance, an unusually remarkable increase both in the number of owners and amount of property passing in Scotland; this last fact, I believe, having already given rise to the statement that there has been something unexampled in the increase of personal property in Scotland. The explanation appears to be, however, that the increase of property in Scotland is, to some extent, only apparent, being due partly, for instance, to the fact that by Scotch law mortgages are real property, whereas in England they are personal property, so that it was necessary, in the course of administering the tax, to pass a special law enabling the Commissioners of Inland Revenue to bring Scotch mortgages into the category of personal property.* This is only one illustration of the caution with which such figures must be used. Taking them in the lump, and not pressing comparisons between the three divisions of the United Kingdom, or any other points of detail which might be dangerous, we appear to be safe in the main conclusion that the number of owners of personal property liable to probate duty has increased in the last fifty years more than the increase of population, and that on the average these owners are only about 15 per cent. richer than they were, while the individual income of the working classes has increased from 50 to 100 per cent.

The next piece of statistics I have to refer to is the number of separate assessments in that part of Schedule D. known as Part I., viz., Trades and Professions, which excludes public companies and their sources of income, where there is no

* See 'Special Report of Commissioners of Inland Revenue,' 1870, vol. i., p. 99. The law on this and other points was altered by 23 & 24 Vict. cap. 80.

reason to believe that the number of separate assessments corresponds in any way to the number of individual incomes. Even in Part I. there can be no exact correspondence, as partnerships make only one return; but in comparing distant periods, it seems not unfair to assume that the increase or decrease of assessments would correspond to the increase or decrease of individual incomes. This must be the case unless we assume that in the interval material differences were likely to arise from the changes in the number of partnerships to which individuals belonged, or from partnerships as a rule comprising a greater or less number of individuals. Using the figures with all these qualifications, we get the following comparison:—

NUMBER OF PERSONS AT DIFFERENT AMOUNTS OF INCOME CHARGED UNDER SCHEDULE D. IN 1843 AND 1879-80 COMPARED [IN ENGLAND].*

		1843.	1879-80.
£	£		
150 and under 200	.	39,366	130,101
200	300	28,370	88,445
300	400	13,429	39,896
400	500	6,781	16,501
500	600	4,780	11,317
600	700	2,672	6,894
700	800	1,874	4,054
800	900	1,442	3,595
900	1,000	894	1,396
1,000	2,000	4,228	10,352
2,000	3,000	1,235	3,131
3,000	4,000	526	1,430
4,000	5,000	339	758
5,000	10,000	493	1,439
10,000	50,000	200	785
50,000 and upwards	.	8	68
Total	.	106,637	320,162

* The figures for 1843 cannot be given for either Scotland or Ireland.

Here the increase in all classes, from the lowest to the highest, is between two and three times, or rather more than three times, with the exception of the highest class of all, where the numbers, however, are quite inconsiderable. Again a proof, I think, of the greater diffusion of wealth so far as the assessment of income to income tax under Schedule D. may be taken as a sign of the person assessed having wealth of some kind, which I fear is not always the case. If the owners of this income, at least of the smaller incomes, are to be considered as not among the capitalists, but among the working classes—a very arguable proposition—then the increase of the number of incomes from £150 up to say £1000 a-year, is a sign of the increased earnings of working classes, which are not usually thought of by that name. The increase in this instance is out of all proportion to the increase of population.

In giving these figures I have omitted the incomes under £150. There is quite a want of satisfactory data for any comparison, I think, except as regards incomes actually subject to assessment, and the data at the beginning of the period are specially incomplete.

Whichever way we look at the figures, therefore, we have this result, that while the increase of personal property per head of the capitalist class, according to the probate returns, is comparatively small, being only about 15 per cent., yet there is an increase of the number of people receiving good incomes from trades and professions out of all proportion to the increase of population. We cannot but infer from this + that the number of the moderately rich is increasing, and that there is little foundation for the assertion that the ✓ rich are becoming richer. All the facts agree. The working classes have had large additions to their means; capital has increased in about equal ratio; but the increase of capital

per head of the capitalist classes is by no means so great as the increase of working-class incomes.

I should wish further to point out, however, that it is a mistake to speak of the income in the various schedules to the income tax as the income of a few, or exclusively of classes which can be called capitalist or rich. A suspicion of this has already been raised by the facts as to trades and professions. Let me just mention this one little fact in addition. Out of £190,000,000 assessed under Schedule A. in 1881-82, the sum of £11,359,000 was exempted from duty as being the income of people whose whole income from all sources was under £150 a-year. If we could get at the fact as to how the shares of public companies are held, and as to the immense variety of interests in lands and houses, we should have ample confirmation of what has already appeared from the probate duty figures, that there is a huge minority interested in property in the United Kingdom, great numbers of whom would not be spoken of as the capitalist classes.

To test the question as to whether there has been any disproportionate increase of capital, and of the income from it, in yet another way, I have endeavoured to make an analysis of the income tax returns themselves, distinguishing in them what appears to be the income of idle capital from income which is derived not so much from the capital itself as from the labour bestowed in using the capital. Only the roughest estimate can be made, and the data, when we go back to 1843, are even more incomplete than they are now; but I have endeavoured as far as possible to give everything to capital that ought to be given, and not to err on the side of assigning it too small a share. The whole of Schedule A. is thus assigned to capital, although it is well known that not even in Schedule A. is the income obtained without exertion and care, and some risk of loss, which are entitled to re-

muneration. In Schedule D. also I have allowed that all the income from public companies and foreign investments is from idle capital, although here the vigilance necessary, and the risk attendant on the business, are really most serious, and part of the so-called profit is not really interest on idle capital at all, but strictly the remuneration of labour. I have also rather exaggerated than depreciated the estimate for capital employed in trades and professions, my estimate being rather more than that of Mr. Dudley Baxter in his famous paper on the National Income. With these explanations I submit the accompanying estimate of the share of capital in the income-tax income at different dates (see p. 402).

This estimate may be summarised as follows:—

SUMMARY OF ANALYSIS OF INCOME-TAX INCOME IN UNDERMENTIONED YEARS.

[In millions of pounds.]

Year.	From Capital.	From Salaries, &c.	Total.
	£	£	£
1843 . . .	188½	93½	282
1862 . . .	252½	107½	360
1881 . . .	407	177	584

Thus a very large part of the increase of the income-tax income in the last forty years is not an increase of the income from capital at all in any proper sense of the word. On the contrary, the increase in the income from capital is only about two-thirds of the total increase. This increase is, moreover, at a less rate than the increase of the capital itself, as appearing from the Probate Duty returns,* a point which

* These returns, however, it should always be remembered, do not include real property.

ANALYSIS OF THE INCOME TAX RETURNS FOR THE UNDERMENTIONED YEARS, SHOWING THE ESTIMATED INCOME FROM CAPITAL ON THE ONE SIDE, AND THE ESTIMATED INCOME FROM WAGES OF SUPERINTENDENCE AND SALARIES ON THE OTHER SIDE.

[In millions of pounds, 000,000's omitted, *i.e.*, 10 = £10,000,000.]

	1881.		1862.		1843.	
	From Capital.	From Salaries, &c.	From Capital.	From Salaries, &c.	From Capital.	From Salaries, &c.
Schedule A.—						
Land, tithes, &c.,						
exclusive of						
houses . . . }	70,	nil	60,	nil	57,	nil
Messuages, &c. .	117,	nil	62,	nil	41,	nil
Schedule B.—						
Occupation of land	25,*	44,	22½,	38½,	20,	36,
Schedule C. . .	40,	nil	29,	nil	29,	nil
„ D. (Part I.)	64,†	100,†	32,	49,	29½,	46½,
„ „ („ II.)	91,	nil	47,	nil	12,	nil
„ E. . .	nil	33,	nil	20,	nil	11,
	407,	177,	252½,	107½,	188½,	93½,

NOTE.—In the estimate for 1843 the figures assigned to Schedule A. are only those of lands and tithes and houses to correspond with the existing Schedule A.: and the figures of Schedule D. include mines, quarries, railways, &c., now in Schedule D. An estimate is also made of the totals for Ireland, based on the returns of 1854, the total gross income under all the schedules thus estimated being about 30 million pounds.

* Interest on 500 millions of capital in 1881 at 5 per cent. In my paper on accumulations of capital, I estimated agricultural capital at a larger sum than this; but since then there has been some loss of agricultural capital, and if a larger sum were taken, the rate of interest used in the calculation for the present purpose should be less.

† Estimating that the income here is worth four years' purchase, and that it may be capitalised at that rate; and then allowing that this capital earns 10 per cent., the rest being wages of superintendence or salaries.

deserves special notice. The conclusion therefore is, that the working classes have not been losing in the last fifty years through the fruits of their labour being increasingly appropriated to capital. On the contrary, the income from capital has at least no more than kept pace with the increase of capital itself, while the increase of capital per head, as we have seen, is very little; so that it may be doubted whether the income of the individual capitalist from capital has on the average increased at all. If the return to capital had doubled, as the wages of the working classes appear to have doubled, the aggregate income of the capitalist classes returned to the income tax would now be 800 instead of 400 millions. In other words, it would not be far short of the mark to say that almost the whole of the great material improvement of the last fifty years has gone to the masses.

The share of capital is a very small one. And what has not gone to the workmen so-called, has gone to remunerate people who are really workmen also, the persons whose incomes are returned under Schedule D. as from "Trades and Professions." The capitalist as such gets a low interest for his money and the aggregate return to capital is not a third part of the aggregate income of the country, which may be put at not less than 1200 millions, and is, I should estimate, not much more than a fourth part.

It will be interesting I think to present these conclusions in the form of an account. We have not, as I have already said, an exact statement of aggregate earnings, either at the beginning or at the end of the period; but assuming the aggregate income of the people as about 1200 millions now, and that the wages of working men are, per head, twice what they were, the aggregates in 1843 and at the present time would compare as follows:

PROGRESS OF NATIONAL INCOME.

[In millions of pounds.]

	Income in 1843.	Income at Present Time.	Increase.	
			Amount.	Per Cent.
Capitalist classes from capital	£ 190	£ 400	£ 210	110
Working income in income- tax returns }	90	180	90	100
Working income not in in- come-tax returns }	235	620	385	160
	515	1,200	685	130

PROGRESS OF NATIONAL CAPITAL PAYING PROBATE DUTY.

	1838.	Present Time.	Increase.	
			Amount.	Per Cent.
Amount of capital .	£ 55 mlns.	£ 140 mlns.	£ 85 mlns.	155
„ per estate .	2,200	2,500	300	14

NOTE.—Increase of working income per head 100 per cent.

From this it appears that the increase of what is known as working-class income in the aggregate is greater than that of any other class, being 160 per cent., while the return to capital and the return to what are called the capitalist classes, whether it is from capital proper or, as I maintain, a return only in the nature of wages, has only increased about 100 per cent., although capital itself has increased over 150 per cent. At the same time the capitalist classes themselves have greatly increased in number, so that the amount of capital possessed among them per head has only increased 15 per cent., notwithstanding the great increase in capital

itself, and the average income per head can have hardly increased at all. On the other hand, as the masses of the nation, taking the United Kingdom altogether, have only increased about 30 per cent. since 1843, when these income tax figures begin, while their aggregate incomes have increased 160 per cent., it is explained how these incomes have gained, individually, about 100 per cent. as against hardly any increase at all in the incomes of what are called the capitalist classes, on the average. Thus the rich have become more numerous, but not richer individually; the "poor" are, to some smaller extent, fewer; and those who remain "poor" are, individually, twice as well off on the average as they were fifty years ago. The "poor" have thus had almost all the benefit of the great material advance of the last fifty years.

We may now conclude this long inquiry. It has been shown directly, I believe, that, while the individual incomes of the working classes have largely increased, the prices of the main articles of their consumption have rather declined; and the inference as to their being much better off which would be drawn from these facts is fully supported by statistics showing a decline in the rate of mortality, an increase of the consumption of articles in general use, an improvement in general education, a diminution of crime and pauperism, a vast increase of the number of depositors in savings banks, and other evidences of general well-being.

Finally, the increase of the return to capital has not been in any way in proportion, the yield on the same amount of capital being less than it was, and the capital itself being more diffused, while the remuneration of labour has enormously increased. The facts are what we should have expected from the conditions of production in recent years.

Inventions having been multiplied, and production having been increasingly efficient, while capital has been accumulated rapidly, it is the wage receivers who must have the benefit. The competition of capital keeps profits down to the lowest point, and workmen consequently get for themselves nearly the whole product of the aggregate industry of the country. It is interesting, nevertheless, to find that the facts correspond with what theory should lead us to anticipate.

The moral is a very obvious one. Whatever may be said as to the ideal perfection or imperfection of the present economic *régime*, the fact of so great an advance having been possible for the masses of the people in the last half-century is encouraging. It is something to know that whether a better *régime* is conceivable or not, human nature being what it is now (and I am one of those who think that the *régime* is the best, the general result of a vast community living as the British nation does, with all the means of healthy life and civilisation at command, being little short of a marvel if we only consider for a moment what vices of anarchy and misrule in society have had to be rooted out to make this marvel); still, whether best or not, it is something to know that vast improvement has been possible with this *régime*. Surely the lesson is that the nation ought to go on improving on the same lines, relaxing none of the efforts which have been so successful. Steady progress in the direction maintained for the last fifty years must soon make the English people vastly superior to what they are now.

I should like to add just one or two remarks bearing on questions of the moment, and as to the desirability or possibility of a change of *régime* now so much discussed, which the figures I have brought before you suggest. One is, that apart from all objections of principle to schemes of

confiscating capital,—land nationalisation, or collectivism, or whatever they may be called,—the masses could not hope to have much to divide by any such schemes. Taking the income from capital at 400 millions pounds, we must not suppose that the whole of that would be divisible among the masses if capital were confiscated. What the capitalist classes spend is a very different thing from what they make. The annual savings of the country now exceed 200 million pounds, being made as a rule, though not exclusively, by the capitalist classes. If then the 400 million pounds were to be confiscated, one of two things would happen: either the savings would not be made, in which case the condition of the working classes would soon deteriorate, for everything depends upon the steady increase of capital; or the savings would be made, in which case the spending power of the masses would not be so very much increased. The difference would be that they would be owners of the capital, but the income would itself remain untouched. The system under which large capitals are in a few hands may, in fact, have its good side in this, that the Jay Goulds, Vanderbilts, and Rothschilds cannot spend their income. The consequent accumulation of capital is, in fact, one of the reasons why the reward for labour is so high, and the masses get nearly all the benefit of the great increase of production. The other remark I have to make is that if the object really aimed at by those who talk of land nationalisation and the like is carried out, the people who will suffer are those who receive large wages. To effect what they intend, the agitators must not merely seize on the property of a few, they must confiscate what are as much earnings as those of a mechanic or a labourer, and the wages of the most skilled mechanics and artisans themselves. The agitation is, in fact, to level down, to diminish the reward of labourers who receive a large

wage because they can do the work the community requires, the proof being that in a market without favour they get the wage, and to increase the reward of other labourers beyond what in the same free market the community would freely give them. Whether the production would be continued at all if there were any success in these attempts, common sense will tell us. Those who have done some hard work in the world will, I am sure, agree with me that it is only done by virtue of the most powerful stimulants. Take away the rewards, and even the best would probably not give themselves up to doing what the community wants and now pays them for doing, but they would give themselves up either to idleness or to doing something else. The war of the land nationaliser and Socialist is then not so much with the capitalist as with the workman, and the importance of this fact should not be lost sight of.

XI.

FURTHER NOTES ON THE PROGRESS OF THE
WORKING CLASSES.*

THE great interest attaching to it must be my excuse for returning to the subject of my inaugural address as President in the session of 1883-1884. I do not propose to bring forward many new facts: the most important, in truth, lie on the surface, and apart from an elaborate investigation, which has yet to be made, and which may in fact be impossible, owing to the defectiveness of the earlier records, I doubt whether much could be added to the triple and quadruple chain of evidence by which the great progress of the working classes in the last half century is proved. The great rise of money wages among labourers of every class, coupled with stationary or even falling prices of commodities on the average, the all but universal shortening of the hours of labour, the decline of pauperism, the enormously increased consumption of the luxuries of the masses, the improvement in the rate of mortality—these and other facts combine to prove that there has been a great general advance in well-being among the masses of the community. The evidence is cumulative, and to disprove or throw doubt on one item in the long list of particular facts

* Read before the Statistical Society, 19th January, 1886. The Appendices referred to were published in full, along with the paper and discussion, in the Statistical Society's *Journal* for March, 1886.

supporting any one of these propositions hardly affects the impression given by the survey of the whole. To justify the belief that there has been no great general advance, every one of these propositions would have to be disproved, and an opposite set of statements, all hanging together and all supporting the view of retrogression, or no advance, or very little advance, would have to be made good. There are too many facts to permit the setting up of a plea of ignorance or impossibility of arriving at any conclusion. But while hoping to add very little to the main propositions formerly advanced, it may perhaps be possible to clear up some misconceptions which have arisen, and to discuss a few subsidiary or connected questions which are intrinsically of great importance: questions as to the degree of the improvement, as to the way in which it is diffused, as to the improvement in other countries, as to the movements in prices which have occurred or are in progress, as to what is meant by the phrase "working classes," and whether for purposes of strict economic discussion the meaning of the phrase, as popularly understood, ought not to be widened—are all raised by the general discussion, and their consideration should help to throw light on the main question itself. In any case the paper will be a peg for discussion among yourselves, on a subject which happens to attract an unusual degree of attention at the present moment.

I.—THE REASONS FOR A FIFTY YEARS' COMPARISON.

BEFORE passing on to some of the points just mentioned, let me glance only for a moment at a preliminary point, which has given rise to observations at which I have been very

much astonished. Why select for comparison with the present time, it has been said, a period just half a century ago? It has even been hinted, I believe, that being no friend of the working classes, and holding a brief from the capitalist classes, so called, against them, I selected the date of half a century ago with malice aforethought, knowing that the working classes were then in a state of special degradation; so that what I show as an improvement in their condition is really no more, or little more, than a recovery of the position which they formerly held. In reply to all this I am sure it is hardly necessary to repeat here, what must have appeared so reasonable to all of you—that the date of fifty years ago was selected because it happened to be the jubilee of the Statistical Society, and the beginning of various official statistical records which are beyond measure useful and even indispensable in such investigations. I do not know that it would have been possible to give a better or more natural reason. In a Society formed to promote the study of statistics, and where special attention has always been given to this kind of investigation, it is surely of the highest utility that on the occasion of our jubilee we should review the history, and see what the statistics, which we have helped not a little to improve, tell us regarding the problems it has been our object as a Society to inquire into. There must be some very clever people in the world, when the explanation of a deep design against the working classes as the motive for choosing the period half a century ago can be substituted for the very obvious and natural explanation which I gave in the address itself.

I have not introduced this point, however, merely to give a personal explanation. The selection of a date half a century ago for comparison with the present time having been challenged, I should like to point out that in fact, and

apart from the reasons I have given, such a period is a very good one to select. The danger of short periods in such discussions is obvious. There are so many complicated causes affecting human affairs, and there is so much oscillation and fluctuation in them, that if short periods only are taken into account, what is in fact an eddy in the main stream of events may be mistaken for the main stream itself. We see this mistake made in some of the fair trade discussions now going on, a decline in the value of our exports at present being spoken of as if it were a permanent decline, whereas in our own country, ever since we had such records, and in every country that has had them, there have been from time to time in particular years declines in aggregate value of a far more marked character than anything we are now witnessing, these fluctuations, however, being quite consistent with steady progress from period to period. I do not say that comparisons are not to be made at all for short periods: for many purposes such comparisons are useful. But for a purpose like the one now in hand, any comparison of the general condition of the working classes would not only be difficult for a very short period, but would perhaps be impossible. A comparison for a period of fifty years in an age of great movement is free from many of the difficulties incidental to a shorter period. It allows for the occurrence of several natural cycles of prosperity and adversity in trade, and gives time for adjustments in money wages and prices due to currency and money market changes, or to such events as the gold discoveries of Australia and California, to be made. On the other hand, as compared with longer periods, a period only fifty years ago is more easily understood; there are many persons living who can remember so far back, and whose memory can check any slips that are apt to be made by the mere student of records without a knowledge of the

actual life. In other words, fifty years is perhaps a long enough period for comparison in an age of active movement, as a distinct step in one direction or another can be perceived; and it is not too long a period, looking to the facilities for check, and for the proper understanding of the facts which its nearness to the present time presents.

I should like to add farther that a comparison with a date fifty years ago has this advantage, that we do in fact know from Porter's 'Progress of the Nation' that considerable progress was made by the masses of the community between the beginning of the century and the year 1836, when he wrote his book. That was Porter's view, at any rate, and although every such opinion is of course subject to criticism, the fact that a statistician like Porter, writing at the time, and acquainted with the notions then prevalent, as well as with the official figures, should assume the fact of considerable progress in his time, is of course of great weight. Having given some attention to Porter's figures, I have come to the conclusion that the evidence he presents is very strong, that there was progress among the masses in the first thirty or forty years of the century, though nothing so decisive as what has since taken place. Virtually then, if we accept Porter's conclusion, we are able to assert a continuous improvement among the masses of the community from the beginning, or nearly the beginning, of the century to the present time—a very long period indeed in the life of a nation. In a practical discussion, looking at the way the entire conditions of life and industry have changed in the period in question, it would not be expedient I believe to go farther back. There is little practical utility, it seems to me, in a comparison between the comparatively scanty agricultural communities which formed the population of this country at any time before the beginning of the present

century, and the vast multitudes who are now supported by a highly developed manufacturing system. We have in fact to consider problems as affecting these multitudes, which could not be considered at all before the present century commenced, because until that time agriculture was the staple industry, and the nation subsisted on what was produced at home. However we have arrived at our present condition, we have to take the facts as they are, and the main fact in a material view undoubtedly is that coincident with the most unprecedented growth of population in an old country, a growth far beyond the limits of the home means of subsistence on the present scale of living, there has been a general advance in the scale of living itself. How far the facts of the future are likely to correspond is a question of the deepest interest, but on which antiquarian researches, though useful in their own place, can throw very little light.

I should like to add, however, by way of caution to students of the subject in its antiquarian aspect, that the commonly entertained view as to a degradation of the condition of the masses of the people having occurred before the period at which I commenced, requires very careful consideration and criticism. When mass is compared with mass from century to century, there are many reasons for doubting that degradation took place at any time, and for believing on the contrary in a slow and gradual improvement for many centuries past. The increasing rapidity in the growth of population, indicating a diminishing rate of mortality, is alone so significant as to throw doubt on many conclusions as to the deterioration of the masses at any period. These conclusions appear to have been formed very often without much attention to the relative numbers of different classes in different periods, or to the question what classes in one age are the proper analogues of the classes in a different age; the

modern agricultural labourers of England, for instance, being sometimes compared with the yeomen of a former time, whereas the middle and superior artisan classes now occupy the place in society of the former yeomen. Statistically all such questions are of obvious importance, and any study which overlooks them should be distrusted. When they are attended to, I doubt if there is any period of more than a century's duration in our history (with the single exception perhaps of the second century after the Black Death, after which event there was, according to all the authorities, a sudden and exceptional advance, which may not have been quite maintained) in which the condition of the masses has not been better than in the period just before. At any rate the greatest care is required in studying the books on the subject.

II.—THE RISE IN MONEY WAGES.

PASSING from this preliminary point, I come to the question of the degree of improvement in the condition of the working classes in the last fifty years. In my address I was careful not to give a precise answer to this question, and it is not one perhaps to which a very precise answer can be given. All the elements are indeterminate. Not only the individuals but the classes at different rates of wage are innumerable, and they are differently constituted at the beginning and end of the period; while many of the facts which indicate conclusively a great average advance in well-being help very little in solving the farther question as to the degree of improvement. But while no very precise answer is possible, I wish to point out that the reasons for believing in a very considerable degree of im-

provement, almost if not quite to the extent of enabling us to say that the working classes are twice as well off as they were fifty years ago, are so strong as to be beyond reasonable doubt. The data may be incomplete, but read with a little care they show us that the minimum limit of the improvement must be a very high one.

As to the question of a great rise in money wages, which is conclusive of the whole matter if we admit that prices on the average have not increased, I do not suppose there is any real doubt anywhere. The only serious challenge to the assertion of general improvement which I have seen was given by Mr. Hutchinson in the 'Nineteenth Century,' for October, 1884; but Mr. Hutchinson based his objection mainly on the statement that prices and the cost of living have risen. As to the rise in money wages, he says: "It is no part of my purpose to dispute that the working man of to-day is not in a better position, that he is not better fed, better clothed, better housed, and better educated than his immediate fore-elders as a class may have been. The broad fact is that with the advent of railways, and other improved means of communication and distribution, there has been a greater call upon his resources, and a consequent rise in the remuneration of his labour." This admission, it may be observed, goes even farther than the purpose for which I am quoting it, and in fact admits my whole argument; but as Mr. Hutchinson proceeds to qualify it in the remainder of the last sentence, which I do not quote, though I think his qualification really inconsistent with the admission itself, I only quote it for what he does substantially admit; viz., the fact of a rise in the remuneration of labour. It is true that Mr. Hutchinson adds in a foot-note, "From oral information obtained in answer to questions addressed to the older workmen in various trades, as to the relative position monetarily

of the two periods, I am disposed to doubt that there has been such an advance all round as Mr. Giffen states." But this "disposition to doubt," without any stated facts to back it, and without defining what he understands me to have said on this head, does not amount to much, and the statement of a great rise in money wages passes in fact unchallenged. I may add that in the course of a very voluminous correspondence, which my address two years ago has entailed upon me, I have not had a single letter questioning the fact of a great rise in money wages, though I have had not a few letters in the opposite sense. This negative confirmation, when there are so many people living who could state contradictory facts if they knew them, is obviously of the highest value.

Still, in the absence of express questions, and of any allegation of contradictory facts, there is some unwillingness to admit, I think, the full meaning of the facts which I stated. Improvement of some kind is admitted, but there is a vague feeling that the figures are too few to support the conclusion which I drew, that it is at least between 50 and 100 per cent., and with an allowance for the shortening of the hours of labour, may be placed nearer the 100 than the 50, if not over the 100. I confess that an improvement of 50 per cent., apart from the shortening of the hours of labour, would in my opinion be immense, and I should be quite satisfied with the general admission of so great an improvement. All I would urge is that while so much improvement must at least be admitted, there is no small ground for adopting the higher figure of 100 per cent. or thereabouts.

Now as to the fewness of the figures respecting the rise in money wages which I quoted, let me point out that having regard to the sources from which the figures were taken, and

the nature of the facts to be illustrated, the results were of a convincing kind. What I did mainly was to take the records of wages from the volumes of trade, revenue, &c., fifty years ago, and wherever it was possible to obtain a figure at that time which could properly be compared with the similar figures in the "Miscellaneous Statistics" at the present time, to make the comparison. In addition, I referred to the only other official record of wages we have got, that of seamen, though it only goes back for about thirty years; and the only unofficial figure I quoted was that of Sir James Caird with reference to the wages of the agricultural labourer, his figure in turn being based largely on official evidence. Substantially, then, what I made use of as far as possible were official data, such as they were, without any process of selection or adaptation. The result was that among the sixteen items obtained for comparison from the miscellaneous statistics, there was in all cases an advance of some sort, and only in three instances an advance of less than 50 per cent. The advance was generally over 70 per cent., and in some cases over 100 per cent. The trades referred to included the textile manufactures, mines, and the housebuilding trades, embracing therefore a large part of the population. As regards seamen's wages again, the record showed usually an advance of about 70 per cent. in thirty years. I am still of opinion that such figures, corroborated as they were by Sir James Caird's conclusion as to the advance in agricultural wages, were entitled logically to very great weight. There having been nothing arbitrary in the process of selection, it was impossible to suppose that accident could have brought it about that in all cases where a comparison could be made there should invariably be found a large money advance. As we must assume that like causes produce like effects, there must

equally have been an advance in those wages where no comparison could be made. I am disposed even to go farther in this question of the bearing of the evidence. Where it is well ascertained in a number of cases that the remuneration of workmen for precisely the same labour is 100 per cent., and in others, say, 50 per cent. more than it was, I am disposed to believe that the advance all round must approach to the higher figure. It is the higher percentage which should be held to be the governing percentage. The reason is that the maximum increase would not be paid in any case without a real scarcity of the labour required in proportion to the work to be done; that this scarcity could only arise in a rapidly increasing population either from a disproportionate growth of the industry, which does not appear to have occurred in some of the cases in question, or, in the absence of such a disproportionate growth, from a demand for the labour in other pursuits; and that on the other hand the smaller percentage of increase in other cases might arise from the substitution of one kind of labour for another, the proper comparison in the latter case being not between the actual payments at different times for the same work done, but between the payments to the labourers engaged and the payments which would have been made to them for the inferior labour from which they have been taken away. To put a concrete instance: it is quite possible that the lower kinds of skilled work may now be performed by workmen or the children of workmen who were previously wholly unskilled—who were agricultural or general labourers. In that case the wages they receive for the higher work are properly to be compared with those they received as unskilled labourers, not with those formerly paid for the same work. Were this to be done, the general rate of advance

would be found to correspond more nearly than might at first be thought with the maximum advance in particular cases.

It may perhaps be urged *per contra* that there may be a deterioration of labour; that there are high wages in certain cases, because workmen refuse to learn and are becoming less skilled, and not because of a scarcity of skilled labour arising from an increased demand for it, and that the lower percentage of increase in other cases is due to the inroad of competitors from above and not from below. Such an explanation it appears to me would be very far fetched indeed, and would be quite inconsistent with the general conditions of modern industry, which makes heavier and heavier demands on the intelligence, education, and moral qualities of the workman. But if no such explanation is admissible, then we must admit that among instances of increase of wages among the working classes for apparently the same work, the higher percentages of increase are more likely to correspond with the average general increase in wages than are the lower percentages.

The point does not seem to me doubtful, but in any case it is one on which a judgment must be formed when we are dealing with so complicated a question as the general increase of wages in a country like England. The employments in the aggregate being so entirely different from what they were formerly, many new ones coming into existence, while the old ones die out, we must remember that the comparison of wages in the same employments, that is, for precisely the same work, only gives an approximation to the result which we wish to arrive at. The question remains whether the ruling tendency has been to change from employments at low wages to employments at high wages, and if that be the case, then the changes showing a maximum increase in rates

for apparently the same work are more likely to correspond with the average improvement than are changes showing a minimum increase.

There is another aspect of the question which has also to be considered. The wages mainly dealt with in the figures which I quoted from the "Miscellaneous Statistics" were those of the artisan classes. I was content, as regards the wages of agricultural labour in Great Britain, to refer to Sir James Caird as an authority for an increase of 60 per cent. in the latter case. What I have now to point out is, that looking at the facts broadly, and granting that the artisan classes on the average have only improved about 50 per cent. or thereabouts in money wages, yet the facts that the artisan classes as a rule are better paid in money to the extent of 50 per cent. and upwards than the agricultural labourers, and that the increase of population in the last fifty years has been among the artisan and middle classes, the agricultural labourers having diminished in numbers, would in fact imply that the average money wages of the working classes of the community, looking at them in the mass, and comparing the mass of fifty years ago with the mass of the present time, have increased very nearly 100 per cent. The average was determined in Great Britain fifty years ago by a mass composed in nearly equal proportions of agricultural and non-agricultural labour; in the United Kingdom it was composed in nearly equal parts of non-agricultural labour in Great Britain, of agricultural labour in Great Britain, and in the poorly paid labour of Ireland, agricultural and non-agricultural together, receiving in the aggregate only half the rate per head of even the agricultural labour of Great Britain, and only a third or less of the rate per head of the non-agricultural labour of Great Britain. Now the mass is composed in something like the following proportions:—

Non-agricultural labour in Great Britain . . . Three-fourths.
 Agricultural labour in Great Britain . . . One-eighth.
 Labour in Ireland „

In other words, the last two classes, which constituted each about one-third of the whole manual labour class of the United Kingdom fifty years ago, now constitute only one-eighth each, and the remaining highest paid class which was only one-third fifty years ago, is now three-fourths of the whole. Even allowing for no advance at all in the average earnings per head of the latter class, such a change would involve a great advance in the mass. I propose to illustrate the matter practically in the course of this paper, but a hypothetical illustration may be useful. Supposing that the wages of the three classes were respectively £60, £40, and £20 fifty years ago, and that the wages themselves have not risen at all since then, we should get the following average wages fifty years ago and at the present time, in consequence of the mere change in the composition of the mass. Dealing with a supposed mass of 600 labourers in each case, I submit the following comparison:—

Labourers.	Fifty Years ago.			Labourers.	Present Time.		
	Proportion.	Wage.	Total Earnings.		Proportion.	Wage.	Total Earnings.
200	$\frac{1}{3}$ rd	£ 60	£ 12,000	450	$\frac{3}{4}$ ths	£ 60	£ 27,000
200	$\frac{1}{3}$ rd	40	8,000	75	$\frac{1}{8}$ th	40	3,000
200	$\frac{1}{3}$ rd	20	4,000	75	$\frac{1}{8}$ th	20	1,500
600	—	40	24,000	600	—	52½	31,500

Average improvement about 33 per cent.

Thus, without any increase of wages at all, there is an enormous improvement simply because the population at the

higher rate of wages has increased disproportionately to the others. If now we allow for an improvement of 50 per cent. only in the unit of each class, we get the following result:—

Labourers.	Fifty Years ago.			Labourers.	Present Time.		
	Proportion.	Wage.	Total Earnings.		Proportion.	Wage.	Total Earnings.
200	$\frac{1}{3}$ rd	£ 60	£ 12,000	450	$\frac{3}{4}$ ths	90	£ 40,500
200	$\frac{2}{3}$ rd	40	8,000	75	$\frac{1}{8}$ th	60	4,500
200	$\frac{1}{3}$ rd	20	4,000	75	$\frac{1}{8}$ th	30	2,250
600	—	40	24,000	600	—	78 $\frac{1}{4}$	47,250

Here the average improvement is very nearly 100 per cent., with a rise of only 50 per cent. per head in the wages of each class.

It is this element in the question, viz., the change in the composition of the mass of labourers, which appears to be altogether overlooked in a mere comparison of the wages of a given employment fifty years ago and at the present time. When such comparisons have been made at any length which may be thought expedient, a still broader survey of the facts must be made: What kinds of labour have increased, and what kinds have diminished, become most important considerations. For this reason, among others, I attempted no exact statement of averages in using the table of money wages which I gave in my former paper. The general run of the facts appeared to be more interesting and instructive than any attempt at exact percentages of increase or decrease, which are in truth impossible in such an inquiry, though the general conclusions may themselves be beyond doubt. What I have said may show that even an improvement of only 50

per cent. in wages, which nobody seems to question, comparing given employment with given employment, implies, under the actual circumstances of a change in the composition of the working population, a much greater improvement on the average than 50 per cent.

A third fact on which I desire to lay some stress in a question of the average improvement in money wages, is the very great improvement which has taken place in the wages of the lowest class of labour. The tendency of the economic changes of the last fifty years has been to reduce the proportion of this description of labour to the total mass; its numbers have diminished on account of the openings for labour in other directions; but the diminution has gone along with a steady improvement in the condition of the most unskilled labourers themselves.

To illustrate this point I have printed in the Appendix (see Appendix A.*), extracted from the tables of revenue, commerce, population, &c., and from the "Miscellaneous Statistics of the United Kingdom," particulars of the wages paid to the non-agricultural labourers fifty years ago and at the present time. The list is much longer for the present time than for the earlier date, but some items fifty years ago and at the present time can be compared. Generally the effect appears to be that while the highest class of unskilled labour or little skilled labour of a non-agricultural description fifty years ago was paid about 15s. per week, the corresponding figure at the present time, by which I mean of course about two or three years ago, is about 25s. weekly. Similarly about fifty years ago a labourer's common wage was about 11s. or 12s. weekly; and the run of the figures now is about 17s. or 18s. up to 20s. or 21s. weekly. The wages are higher in London and some of the leading manufacturing towns than elsewhere, but comparing like with like, the above figures seem to give a fair

* See note, p. 409.

idea of the change which has occurred. In other words, the improvement is from 70 to 90 per cent. in the money wages of unskilled non-agricultural labour. Some particulars may be stated in a tabular form thus:

WAGES OF UNSKILLED LABOUR (NON-AGRICULTURAL) FIFTY YEARS
AGO AND AT THE PRESENT TIME.

[Compiled from the particulars in Appendix A.]

	Fifty Years ago.		Present Time.		Increase.	
					Amount.	Per Cent.
Labourers, London . . .	s.	d.	s.	d.	s.	d.
15	—	25	—	10	—	67
„ Bradford . . .	15	—	21	9	6	9
Bricklayers' labourers, Manchester	12	—	22	—	10	—
Spademen, Manchester (maximum)	15	—	22	—	7	—
Bricklayers' labourers, Glasgow .	9	—	18	—*	—	—
Stocking makers, Leicester. .	8	3	14	—†	5	9
Labourers, Londonderry . .	8	—	16	—†	8	—
						100

I should have liked to give a longer table, but substantially, keeping in mind the logic of the facts, even a short table may satisfy us of the magnitude of the improvement in the wages of unskilled labour. It will not fail to be observed that the improvement seems to be greater in Glasgow than in the more southern parts of the country, and there is a similar improvement in Ireland, though I have only been able to give a Dublin quotation in place of a quotation from Londonderry fifty years ago. This may remind us of another change which seems to have been going on in respect of wages. There has been equalisation in given employments throughout the country. Con-

* 48 hours weekly at 4½d. per hour.

† Lowest wage quoted for Leicester.

‡ Dublin.

sequently where rates were relatively lower fifty years ago, there has been more advance than in other cases. This is a fact to be kept in mind when wages in a particular employment in a given place seem to have advanced little. In the employment itself there may have been a great advance through wages in the lower paid places advancing to the higher level.

A similar table can be prepared with reference to agricultural labour. I have placed in the Appendix (see Appendix B.*) a comparison of the rates of wages in different counties of the United Kingdom fifty years ago, and at the date of the recent Royal Commission on Agriculture; the particulars as to the period fifty years ago being extracted from Mr. Purdy's two papers on agricultural wages, read before the Statistical Society in 1861 and 1862,† in which he made use of published and unpublished official returns; and the particulars as to the more recent period being condensed from the reports of the assistant commissioners to the Royal Commission on Agriculture. The general effect of this table is that while the rise in some counties in England, *e.g.*, Kent, is little more than one-third, yet there are many counties, particularly in the south and west, and Wales, in which the circumstances were very distressing fifty years ago, where the rise is 50 per cent. and upwards. In Wales the rise would seem to be about 100 per cent., and in Scotland and Ireland there is nearly as great an improvement. Altogether the comparison would seem to confirm very fully the fact of an average rise of 60 per cent. which Sir James Caird has stated, and which was the figure I made use of in my former paper.

* See note, p. 409.

† See Statistical Society's *Journal*, vol. xxiv., pp. 328-373, and vol. xxv., pp. 425-440.

And the inference from these figures as to rude labour, whether agricultural or non-agricultural, is plain. If the rise has been so great in the wages of a large class of labour at the very bottom of the scale, which has itself been diminishing in quantity because the demand has been more and more for skilled labour of some kind, then we may be tolerably certain that the rise in skilled labour itself, man for man, has not been less, while the improvement in the mass must be greater still for the reason already stated, viz., that the proportion of skilled labour to the whole mass has increased and that of rude labour declined.

In connection with these facts I may also refer, without further dwelling on it, to the fact mentioned in my former paper, that the number of income-tax payers has increased in the last fifty years at a much greater rate than the increase of population.* Mr. Goschen, in his recent address at Manchester on trade depression, has cited fresh figures relating to the last ten years only, entirely confirmatory of the statement, which is placed altogether beyond doubt. It is difficult to suppose that at the bottom of the scale rude labour has improved its money wage, as we have seen, and that at the top of the scale the number of income-tax payers has increased, without a corresponding average improvement having taken place all through the intermediate mass.

Altogether, then, the incredulity with which the assertion of an average increase of 100 per cent. in the money wages of the working classes in the last fifty years, was received in some quarters, does not appear to have any justification.

* See previous Essay, "Progress of the Working Classes in the last Half Century," p. 398.

There are plenty of facts which are well-known and even familiar to justify the assertion, when these facts are themselves studied in connection with the changes in the composition of the mass of the working classes which have undoubtedly occurred.

Before passing from this point, I may refer briefly to one or two statements which have appeared since I delivered my address, and which throw additional light on the subject. First of all I would quote a letter of Mr. Bright's, giving his own experience as a manufacturer, which cannot but be considered a valuable piece of evidence, Mr. Bright being one of those whose memory goes back over the whole period, and who is able to check the dry figures which may be compiled from official and other sources :

“Let your workmen reflect on the change in their condition which free trade has made within the last forty years, since the reform of our tariff. The Corn Law was intended to keep wheat at the price of 80s. the quarter; it is now under 40s. the quarter. The price of tea is now less than the duty which was paid upon it in former days. Sugar is not more than one-third of its cost, when a monopoly of East and West India sugar existed. As to wages in Lancashire and Yorkshire, the weekly income of the thousands of workers in factories is nearly, if not quite, double that paid before the time when free trade was established. The wages of domestic servants in the county from which I come are, in most cases, doubled since that time. A working brick-setter told me lately that his wages are now 7s. 6d. per day; formerly he worked at the rate of 4s. per day. Some weeks ago I asked an eminent upholsterer in a great town in Scotland what had been the change in wages in his trade? He said that thirty to forty years ago he paid a cabinetmaker 12s. per week; he now pays him 28s. per week. If you enquire as to wages of farm labourers, you will find them doubled or nearly doubled in some counties, and generally over the whole country advanced more than 50 per cent., or one half, while the price of food and the hours of labour have diminished. It may be said that milk and butter and meat are dear, which is true, but these are dear because our people by thousands of families eat meat who formerly rarely tasted it, and because our imports of these articles are not sufficient to keep prices

at a more moderate rate."—*Extract from letter from Mr. J. Bright, M.P., to Mr. A. Wilde. ('Times,' 18th November, 1881).**

The next figures I propose to refer to were given by the President of the Manchester Statistical Society, Mr. Montgomery, in his very interesting address on 19th November, 1884. Mr. Montgomery tells us that, through the courtesy of friends, he has obtained the rates of wages paid in different mills and works in Manchester and neighbourhood in 1834 and at the present time. There are nine spinning mills and five weaving mills as to which he gives details, while he also gives averages for calico-printing, bleach works, dye works, calendering works, mechanical engineering, glass makers, Macclesfield silk trade, building trades, tailors and policemen, without however going into details respecting these occupations, as in the case of the spinning and weaving mills. As the result, Mr. Montgomery gives the following general summary:—

	Percentage of increase.
Spinning . . .	. 63
Weaving . . .	. 43
Dyeing . . .	. 16
Calico-printing . . .	. 46
Calendering . . .	. 47
Bleaching . . .	. 32
Mechanical engineering . . .	. 18
Glass making . . .	. 40
Macclesfield silk trade . . .	. 37
Building trades . . .	. 46
Tailoring . . .	. 53
Police. . . .	. 46

* Mr. Bright has since elaborated this theme in one of his election speeches at Birmingham, but the above appears sufficient for the present purpose. There is no doubt there are many specific cases of an improvement of 100 per cent., even comparing employment with employment.

And from this Mr. Montgomery concludes that the *average* percentage of increase for all trades, 1834-84, is $40\frac{7}{12}$, which is the mean of the percentages in the summary; and he points out afterwards that this percentage is lower than the figure I had arrived at. From what I have already said, you will understand that even an average improvement like this in the wages of manufacturing labour at Manchester, would imply a much greater improvement on the average throughout the United Kingdom. But Mr. Montgomery's figures in detail, if I may be allowed a remark by way of criticism, are better than his average. His figures, when analysed, do not tell a tale substantially different from mine. Looking through his tables I find that there are not a few cases of increased wages of 100 per cent. and upwards; that in other cases the average of a particular mill or a particular class of work is pulled down by some specially small percentage of increase (*e.g.*, in bleach works there is a class called "stovers," whose increase of wage is only 3 per cent., and if this item were omitted, the increase in bleach works on the average, instead of being 32 per cent. would run up to 38 per cent.); and that but for these exceptions to the general run of the figures, the average, even on the plan adopted by Mr. Montgomery, would come out much higher than $40\frac{7}{12}$ per cent. Keeping in mind what I have already said as to the probability of the higher rates of increase for the same work being more likely to correspond with the general average of improvement for all work, that work itself changing greatly, than are the lower rates of increase, the data which Mr. Montgomery has supplied appear to me to confirm most fully the conclusion that there is an improvement all round in given employments, at any rate if we allow for the shortening of hours of labour, closely approaching 100 per cent.

While commenting on these figures of Mr. Montgomery's, I should also like to point out in passing that the mode of arriving at an average which he employs is one which is somewhat dangerous in an investigation of the present kind, and which ought not to be made use of without grave reserves. Thus as regards spinning, he makes an average of spinners, piercers, tenters, and winders and reelers separately; then adds all together and divides by four; whereby he arrives at an average of 63; although in three out of the four classes the average is higher than this. The average is brought down because in the case of spinners the improvement is only 36 per cent. It is possible that on account of their numbers spinners should either count in a proper average as more than 1 to 4, or less than that. The neglect of relative numbers in calculating these averages is accordingly most serious, and makes the whole process incorrect. In the absence of any knowledge of relative numbers, a good deal of consideration should be given to the run of the figures, extremes, whether high or low, being looked on with some suspicion, and especially in this question, I believe—for the reasons I have already stated—the low extremes. Similarly, in the final summary which I have quoted, each of the trades named is treated as a single and equal unit. The Macclesfield silk trade, glass making, mechanical engineering, and dyeing, giving an average increase of 28 per cent. only, are treated as the equivalent of spinning, weaving, calico-printing, and calendering, giving an average of about 50 per cent. increase. The average in each particular trade is thus in the first instance obtained by a somewhat doubtful process, and then the different trades are combined by a similar process. Notwithstanding, therefore, the percentage which Mr. Montgomery arrives at, I believe it is impossible to look at the

figures, and take into account the numerous cases of large percentages of increase, coupled with a preponderance of cases at rates much higher than his average, without coming to the conclusion that he underrates the real average improvement which has occurred.

In any case, I need hardly say, a well-ascertained increase of over 40 per cent., coupled with shortened hours of labour, would show an enormous improvement in the condition of the masses of the community. It is so important, however, that data such as Mr. Montgomery has collected, should be rightly used, that I hope to be excused for insisting so much on this question of method, and not merely resting satisfied with the broad conclusion that there is an improvement of 40 per cent. It may be hoped that in time there will be many similar collections of figures, and in this view the right handling of them will be of great importance. It need hardly be added, after what I have already said, that even if a right average could be obtained for particular districts such as Manchester, it would have to be considered how far each particular district represented the general progress of the whole community. If town districts like those of Lancashire grow at a faster rate than rural communities, where wages on the average are less than in those town districts, if England itself grows in population at a greater rate than Scotland, and grows while Ireland loses, wages in England being higher than in Scotland or Ireland, then it is exceedingly probable that the percentage increase of wages in Manchester and neighbourhood in fifty years is less and not more than the average of the whole of the United Kingdom.

Before passing from these Manchester figures, it is interesting to notice, I think, that as regards builders' wages, where Mr. Montgomery happens to refer to the same items as are

referred to in the short table contained in my former address, the figures used by Mr. Montgomery and myself are very much the same, though drawn from different sources. Thus he gives bricklayers' wages in Manchester fifty years ago as 23s. and at the present time 36s., the corresponding figures in my paper being 24s. and 36s. Joiners he quotes as 24s. and 36s., the figures in my paper for carpenters being 24s. and 34s. Masons he gives as 27s. and 32s., the figures in my paper being 27s. and 29s. 10d. In these particular cases, therefore, the details given by Mr. Montgomery, while agreeing very nearly with mine, exhibit on the whole a somewhat larger advance. So far as these figures go, therefore, we may infer that the data in the miscellaneous statistics are trustworthy, and above all do not exaggerate the improvement in workmen's money wages which has occurred.

The next set of figures to which I propose to make a brief reference are those which Mr. Leone Levi published about a year ago. You will recollect that in my former paper I referred to the desirability of a continuation of the work which our colleague accomplished in 1867, and I may congratulate him therefore on his having been able to do so. We have now accordingly for two dates, 1867 and the present time, a statement of the average earnings of the working classes of the community, made up so as to show the aggregate earnings of each class and of all workmen together, and so as to show, therefore, an average per head. The period covered is of course too short to enter into the present comparison, but so far as the figures go they are confirmatory of the general conclusion. In the seventeen years 1867-84 Professor Levi finds that the aggregate earnings of the working classes have risen from 418 million to 520 million pounds, or nearly 25 per cent., the increase of the numbers being only 11 per cent.; and the average

increase per head is from £38 to £42 14s., or rather more than 11 per cent.

Allowing that probably since 1873 there has been little increase in the money wages of working men, but in some cases there has been a decrease, so that the improvement since 1867 only includes altogether a short period in which improvement could take place, the fact that there is nevertheless an improvement of 11 per cent. all round, not counting the shortening of the hours of labour, is confirmatory as far as it goes of an enormously greater improvement in the whole period from fifty years ago to the present time. Part of my former case was that although the cases were comparatively few in number in which the miscellaneous statistics enabled us to go back fifty years, yet in detail shorter periods could be compared more fully, and in each shorter period a considerable increase was to be traced. I should have expected beforehand, even in the period mentioned by him, rather a larger increase than Professor Levi brings out, but the increase in the short period he mentions is certainly quite sufficient to confirm the former statement as to the effect of the wages returns in the miscellaneous statistics.

It only remains to notice briefly what the improvement in wages abroad has been in a corresponding period. The fact of such an improvement would of course tend to confirm the evidence of improvement at home, showing it to be in no way an isolated fact, but part of a wider improvement. This question, however, was dealt with so ably by Mr. Jeans in the paper he read in December, 1884, that I need only glance at it. I desire mainly to refer those of you who are interested in this matter to two works which have recently appeared, giving a great deal of information on this head. The first of these works is that of M. Yves Guyot, 'Principles

of Social Economy,' of which there is now an English translation (London: W. Swan, Sonnenschein, and Co.). I extract from this work, and place in the Appendix C. (see note, p. 409), two tables as to workmen's and workwomen's wages in France early in the century, and at the present time, showing that in the case of workmen in the building trades the rise is in many cases from 69 to 105 per cent., and in others from 41 to 75 per cent., with the one exception of an increase of 20 per cent. only; while in the case of the workwomen, the increase is over 100 per cent. in seven out of nine cases given, and on the average is 94 per cent. These figures fully confirm the official French figures given by Mr. Jeans, showing an average improvement all over France between 1853 and the present time. Similarly M. Yves Guyot gives various figures showing progress in Germany, principally in Alsace. I have extracted two of these tables in the Appendix: the first, showing rates of increase at Mulhouse ranging between 60 and 256 per cent. since 1835, being particularly striking. The second book I refer to is that of Mr. Lowthian Bell, on 'The Manufacture of Iron and Steel' (London: George Routledge and Sons), in which, while comparing English and foreign wages at the present time, he states incidentally not a few facts as to the increase of foreign wages. The cases of increase are not uniform, Mr. Bell as a rule not going back much before 1869, but there is evidence of a considerable increase since that time. For instance, in an establishment on the Rhine, consisting of blast furnaces, foundry, and engineering shops, the average yearly earnings of the whole establishment per man were £31 7s. in 1869, and in 1878, £40 12s. per man, having been in 1873 as high as £52 16s. per man. I must refer you, however, to the book itself; it would be unfair to quote at any greater length.

Both the gentlemen I am quoting note that the increase in wages which has taken place is very largely in the lower kinds of labour, or in districts where wages were previously low. M. Yves Guyot dwells particularly on the fact of the improvement in women's wages. Such facts are of real importance in the question, and go far to confirm what I have already urged as to attaching special weight to the cases of a maximum increase of wages. If the wages of labourers at the bottom of the scale have increased at a greater rate than others, this would imply a very large aggregate improvement indeed, on account of the great mass of the labourers at the bottom of the scale.

Summing up this part of the argument to-night, what I have to urge is that not only is an increase of money wages in the last fifty years clearly ascertained, as well as the probability that this increase cannot be less in almost any case than 50 per cent.; but it is also evident that the increase in very many cases is at a much higher rate, while it is antecedently probable that the increase of the higher rates, where it is possible to compare wages with the same work, indicates more closely the general average increase than does the increase at the lower rates. Then we find that the changes in the composition of the mass of the people, consisting in an increase of artisan and skilled labour in enormous proportion, while the proportion of rude and unskilled labour has enormously declined, are such as to imply a greater average improvement in the whole mass than if we merely compared one specific employment with another. We find also that at different intervals during the fifty years improvements have occurred corroborating the inference of a great improvement which is drawn from a review of the whole period. Finally, there is an improvement abroad which quite corresponds to the improvement at home. That the

degree of improvement in money wages in the last fifty years is accordingly very considerable, not far short of 100 per cent., and probably exceeding that figure, if we compare strictly the whole mass with the whole mass, appears to be in this way fairly established.

It follows consequently that if prices have not risen as compared with what they were fifty years ago, but have rather declined, as I believe them to have done, the only exceptions being rent and "meat," which I dealt with in my former paper, then the vast improvement which I described in the condition of the working classes has undoubtedly occurred. They have at least had the means, whether they have used them wisely or not. On this head, I may remark, there is also practically no question raised, the only challenge I know of being that of Mr. Hutchinson already referred to. Mr. Hutchinson indeed gives a list of prices from the file of the 'Leeds Mercury' in 1835 and 1884, of a very curious description; but the list does not include clothing, while as to flour he admits himself that the average facts fifty years ago and at the present time do not correspond to the indication of the table. He might have said the same of potatoes and one or two other articles, including bacon, which has undoubtedly not risen in price on the average, and comparing period with period, as he represents it. The facts remain undisputed that as regards bread stuffs, clothing, tropical produce, and miscellaneous articles of every sort, prices range lower at present than they did fifty years ago. *Per contra* there has been an advance in meat, except bacon; but with this exception mainly, the changes of prices in the last fifty years have benefited the workman. A sovereign goes farther than it did. As to meat, I shall have something to say later on as to its not concerning the workman fifty years ago as it has since done, the rise in price being in fact due to

the increased consumption of meat by the masses. But allowing for the fall in other articles, it may well be doubted whether the advance in meat, admitting it to have been an article of general consumption fifty years ago, is not fully compensated.

III. THE POSITION FIFTY YEARS AGO.

To bring out more fully the degree of improvement which has occurred, I have thought it might be useful to make various extracts from the literature and Blue-books of fifty years ago, showing how workmen lived, and how differently the condition of the working classes was then spoken of from what would now be the language used.

I may refer first of all generally to Carlyle's 'Sartor Resartus,' and 'Past and Present,' as containing in an extreme form the pessimistic view of the condition of England question. Carlyle's theme constantly was that thousands and millions were starving and permanently under-fed, in fact in the most hopeless condition. Thus in 'Past and Present,' p. 234, he speaks of "two million shirtless or ill-shirted workmen sitting enchanted in workmen's bastilles, and five million more (according to some) in Ugolino hunger cellars." Some of you also may perhaps remember the description in 'Sartor Resartus' of "potatoes and point" as the diet of the Irish peasant. Carlyle constantly spoke of the situation as so terrible and hopeless, that even the abolition of the insane Corn Laws would only give from ten to twenty years of new possibility.

Similarly there are some curious passages in Mr. Disraeli's 'Sybil.' I shall give only one or two extracts. The first is a description of the workman's home: the point here being

that the home spoken of is that of the ordinary British peasant, and not merely of the "outcast," of whom we have heard so much lately :—

"To that home, over which malaria hovered, and round whose shivering hearth were clustered other guests besides the exhausted family of toil, Fever, in every form, pale Consumption, exhausting Synochus, and trembling Ague, returned, after cultivating the broad fields of merry England, the bold British peasant, returned to encounter the worst of diseases, with a frame the least qualified to oppose them; a frame that, subdued by toil, was never sustained by animal food; drenched by the tempest, could not change its dripping rags; and was indebted for its scanty fuel to the windfall of the woods."—'Sybil,' p. 49.

Then we have a dialogue like the following, on the rate of wages :—

"'And what is the rate of wages in your part of the world, Lord Marney?' inquired Mr. St. Lys, who was standing by.

"'Oh, good enough; not like your manufacturing districts: but people who work in the open air instead of a furnace, can't expect and don't require such. They get their 8s. a-week, at least generally.'

"'Eight shillings a-week,' said Mr. St. Lys. 'Can a labouring man with a family perhaps of eight children live on 8s. a-week?'

"'Oh, as for that,' said Lord Marney, 'they get more than that, because there is beer money allowed, at least to a great extent among us, though I for one do not approve of the practice, and that makes nearly 1s. per week additional, and then some of them have potato grounds, though I am entirely opposed to that system.'

"'And yet,' said Mr. St. Lys, 'how they contrive to live is to me marvellous.'

"'Oh, as for that,' said Lord Marney, 'I have generally found the higher the wages the worse the workman. They only spend the money in the beer shops. *They* are the curse of this country.'—P. 95.

Then we have pictures like that of 600,000 handloom weavers ruined by machinery, and earning wages of 1*d.* per hour, and a discussion on the increase of population, which I venture to quote :—

"'I speak of the annual arrival of more than 300,000 strangers in this island. How will you feed them? How will you clothe them? How will you house them? They have given up butchers' meat;

must they give up bread? And as for raiment and shelter, the rags of the kingdom are exhausted, and your sinks and cellars already swarm like rabbit warrens.'

"'Tis an awful consideration,' said Egremont, musing.

"'Awful,' said Gerard, 'it is the most solemn thing since the Deluge. What kingdom can stand against it? Why, go to your history—you're a scholar, and see the fall of the great Roman Empire—what was that? Every now and then there came two or three hundred thousand strangers out of the forests, and crossed the mountains and rivers. They come to us every year, and in greater numbers. What are your invasions of the barbarous nations, your Goths and Visigoths, your Lombards and Huns to our population returns.'"—P. 120.

Even more striking to me, however, because having a ring of most intimate acquaintanceship with the people described, are the descriptions in 'Mary Barton.' I could hardly imagine any of the artisans in the cotton trade at the present time using the following language which the authoress puts into the mouth of Barton :—

"'If I am out of work for weeks in the bad times, and winter comes, with black frost, and keen east wind, and there is no coal for the grate, and no clothes for the bed, and the thin bones are seen through the ragged clothes, does the rich man share his plenty with me as he ought to do, if his religion wasn't a humbug?'"—P. 6.

Both as to the description of probabilities of distress and the disposition of the richer classes the picture would now be untrue. Then we have such a description as that of the Oldham weaver :—

"Oi'm a poor cotton-weyver, as mony a one knoo was,
 Oi've nowt for t' yeat, an' oi've worn eawt my clooas,
 Yo'ad hardly gi' tuppence for aw as oi've on,
 My clogs are both brosten, an' stuckings oi've none,
 Yo'd think it wur hard,
 To be brought into th' warld,
 To be—' clemmed,' * an' do th' best as yo con." †

* "Clem," to starve with hunger. "Hard is the choice, when the valiant must eat their arms or *clem*."—BEN JONSON.

† 'Mary Barton,' cheap edition, p. 26.

I do not propose, however, to weary you with extracts. What I am anxious to impress is that these are descriptions intended to apply to large masses of workmen in the leading industries of the country, with whom bad times were familiar, and who in the best of times never attained the prosperity of our present artisan classes.

If we turn to the Blue-books, we find ample facts telling their own tale, and I give on p. 442 a list of such Blue-books which I have looked into, and which I would commend to the perusal of those who are inclined to dispute that the condition of the workman of this country fifty years ago was so different from what it is now, that when we read it we appear to be reading of a different world. I may refer them, moreover, to a book written forty years ago by Mr. W. T. Thornton, whose name many will recognise as that of a very able economist, and whose abilities I have admired, though on many points I have differed from him. His subject is 'Over Population and its Remedy,' and the second and third chapters of this book are practically a summary of the Blue-books referred to. After speaking of the agricultural labourers of Lincolnshire and Rutland, and of Cumberland and Westmoreland as forming the happiest portion of the English peasantry, although "such labourers as are entirely dependent on wages, although they may be secure from want, can scarcely be said to know anything of comfort,"* Mr. Thornton goes on to describe the mass of agricultural labourers in very different terms. This is his description of the Dorsetshire labourer:—

"In general a field labourer cannot one week with another earn more than 8s. A woman may earn 6d., 8d., or 1s. a day, according to the season, but the employment of women in agriculture is not continuous, and it is supposed that the earnings of a cottager's wife

* 'Over Population and its Remedy,' p. 19.

LIST OF PARLIAMENTARY REPORTS, &C., DEALING WITH THE CONDITION OF THE WORKING CLASSES FIFTY YEARS AGO.

Publications.	Subject.
Report from Committee on Manufactures, &c., 1833, vol. vi.	Statement of <i>weekly earnings and food</i> for family of six persons.
Report from Commissioners of Poor Laws, 1834, vol. xxxix.	Summary table of answers to Q. 14.— “Could a family subsist on their earnings, and on what food?” List of persons from whom communications have been received as to wages and subsistence of foreign labourers. Answers relating to county of Berks. ” ” Kent.
Report from Commissioners of Poor Laws, Part I., 1834, vol. xxx.	Committee on Petition of Weavers.
Reports from Committees, II., 1810.	Wages (highest and lowest) and food of operative weavers.
Reports from Committees on Emigration, 1826–27.	Earnings and living. Statement of, of framework knitters (stocking makers).
Reports from Commission on Factories, 1833, vol. xx.	Families annually relieved at Stockport. Wages of female labour in cotton mills at Manchester. Weekly earnings of males and females in forty-three cotton mills in Manchester. Average weekly and annual income of a family of six persons. Average annual income of agricultural labourers. Manufacturers' employment. Weekly earnings of working classes. Agriculture.
Reports from Committees on Poor Laws (12, Part I.), 1837–38, vol. xviii.	”
Reports from Committees, 1830, vol. x.	”
First Report from Committee on Agriculture, 1836, vol. xiii Part I.	
Report from Committee on Agriculture, 1836, vol. xiii. Part II.	
Report from Committee on Agriculture, 1837, vol. v.	

throughout the year do not much exceed 50s. A man and his wife may therefore earn 9s. a week, or £23 8s. a year, to provide for three and a quarter persons on an average. Fifty shillings go for rent, 30s. for fuel, 30s. more for soap and candles, and £5 for clothes, leaving £12 18s. a year, or about 8½d. a day to buy food for the family, that is to say, a fraction more than 2½d. a head daily. Taking the average price of such bread as is used by the peasantry in the West of England to be 1s. the gallon loaf of 8 lbs. 11 oz., and that of potatoes to be 1s. 2d. per bushel of 55 lbs., 2½d. will purchase about 29 oz. of bread, or 10 lbs. of potatoes. In Ireland, where the character of the potato may be presumed to be best understood, 5 lbs. are considered no more than a sufficient meal for a labouring man; but it appears that two of such meals a day are as much as the Dorsetshire labourer can venture to indulge in. It must be borne in mind that these calculations are not intended to represent the actual condition of the Dorsetshire labourer, but rather to show what it would be if every able-bodied man had to maintain an equal proportion of the helpless members of the community. Most of the aged and orphan poor are maintained by the parish, but it must not on that account be supposed that the average number of persons for whom an agricultural labourer has to provide is less than one and a quarter, or that person's share of the daily 8d. worth of food is proportionally greater. Marriages take place both much more frequently and much earlier among labourers than among people of higher rank, and their families are consequently larger than the average. Certainly the real condition of the Dorsetshire peasantry is very little, if at all, superior to the description given above. Bread and potatoes do really form the staple of their food. As for meat, most of them would not know its taste, if once or twice in the course of their lives—on the squire's having a son and heir born to him, or on the young gentleman's coming of age—they were not regaled with a dinner of what the newspapers call 'old English fare.' Some of them contrive to have a little bacon in the proportion, it seems, of half a pound a week to a dozen persons, but they more commonly use fat to give the potatoes a relish, and as one of them told Mr. Austin, they don't *always* go 'without cheese.'”*

In Wiltshire and Somersetshire Mr. Thornton goes on to say that matters are still worse with the labourer, whose food is bread and potatoes, as in Dorsetshire, but with a larger proportion of potatoes and a smaller of bread. Wages in Somersetshire, he states, are sometimes as low as 6s. a

* 'Over Population and its Remedy,' pp. 20-22.

week, with an allowance of cyder, estimated to be worth 1s. 3d. a week. The range of the labourer's condition throughout England was between this low extreme and the condition of things in Lincolnshire already referred to. As regards Norfolk and Suffolk, where the condition was supposed to be above the average, he states, referring to a recent period of low prices of agricultural produce and distress: "Even when employment was abundant, and while wages remained at the old rate of 10s. a week, the peasantry of these two counties seldom tasted anything better than dry bread; so that when employment was only to be had every other day, and the rate of wages fell to 7s. or 8s. a week, their situation became truly deplorable." We are justified then in describing the general condition of the agricultural labourer in England as deplorable in the extreme, his average wages being only 10s. a week even in good times, and many being far below that average; while the happier but smaller portion in Lincolnshire and the northern counties of England had little more than a sufficiency of plain food, and no surplus.

So much for agricultural labour in England. As regards the Welsh labourers, Mr. Thornton states:—

"The Rebecca riots that took place in South Wales, in the summer of 1843, drew a large share of public attention to the state of the inhabitants of that quarter, where the peasantry seem to be worse off than in the worst parts of England. Seven shillings a week—the minimum of English agricultural wages—are there the maximum, and are obtained only by labourers in the employment of landowners and gentlemen farmers. Male labourers commonly have their cottages rent free. Most of the farms, however, are small, not extending beyond 100 acres, and the poorer farmers pay their men only 8d., 9d., or at most 1s., a day, or 6d. or 8d. a day with food, if, as is often the case, the men board with their masters. Coarse barley bread, flummery, and potatoes, are almost their sole food, and many of the small farmers themselves have little else except milk, cheese and bacon. They seldom taste any other animal food."*

* 'Over Population and its Remedy,' pp. 26 and 27.

It must always be remembered that in these discussions we are not speaking of England merely, but of the whole United Kingdom, which must all be taken into account, even if we were dealing with England only, because the English labour market has itself been largely recruited in the last fifty years from other parts of the United Kingdom. Of course the labourers in Scotland and Ireland were not to be compared with those of England fifty years ago, poor as the latter were. As regards Scotland, Mr. Thornton's statement, p. 41, is explicit, that the diet of the agricultural labourers, whether in the bothy or the farm house, consisted principally of meal, potatoes, fish, milk, cheese, and butter, but they were occasionally treated with butcher's meat. This statement, as far as a certain part of the Lowlands is concerned, I can fully confirm from my own personal recollection. And beyond food there were no large payments in money. The condition of things was not intolerable, the plain living being accompanied by a good deal of culture and high thinking, but in material resources the Scotch peasant was certainly not better than the average agricultural labourer in England. In Scotland, however, there was a lower deep, the misery in the Highlands, and especially in the West Highlands and islands, being pitiable in the extreme, thousands upon thousands being undoubtedly in a state of semi-starvation.

As regards Ireland, I need not harrow you with details of the melancholy condition of things even before the potato famine. In Ulster the food of the peasantry, where the wages were about 1s. a day, is described as consisting of meal, potatoes, and milk; in the southern districts of potatoes and milk without meal, the money wages being 8d. a day; and in the western districts, of the potato alone, without meal, and in most cases without milk, the money

wages on the average being not more than (6d.) per day. The want of employment of any kind at any wage, the semi-starvation, the want of clothing and shelter accompanying this state of things, need not be described in detail. I may refer you to the book itself.* What I am anxious to bring out now is that the descriptions apply to one-third of the labouring population of the United Kingdom of fifty years ago. Whatever may be the state of things in Ireland now—and they have certainly improved to an enormous extent in the last half century—my present point is that in the population of the United Kingdom in the course of fifty years English and Scotch artisans have been largely substituted for the semi-starved or wholly-starved peasantry of Ireland, and many of the descendants of these Irish peasants are in fact to be found in our English and Scotch manufacturing towns.

The labouring population of the towns of the United Kingdom, with the exception of artisans, in good times were only a few degrees better off than their agricultural neighbours.

In some conspicuous cases, particularly that of hand-loom weavers, there was great distress. One condition of the manufacturing population, moreover, was, that of great fluctuation.

“A short time back,” says Mr. Thornton, “the greater part of this vast multitude [400,000 male adults = about 2 millions] seemed to be sunk in the lowest depth of misery. Thousands were wholly unable to procure employment, and might be seen standing in constrained idleness about the streets, or might be found in their dismal houses bending over a scanty fire, their heads sunk on their breasts, and surrounded by pale emaciated beings, imploring them for food which they knew not where to seek.”†

* ‘Over Population and its Remedy,’ chap. iii.

† Ibid., p. 31.

No doubt there have been descriptions in the last year or two of a certain part of the shipbuilding operatives as suffering in a similar manner ; but what I wish to draw attention to is, that Mr. Thornton's description applies to the greater part of the whole manufacturing population of England ; the condition of the agricultural labourers in England, Scotland, and Ireland, then the mass of the population, being what has already been described.

It would be wearisome to multiply details, but depression in trade was so different fifty years ago from what it is now, that I may be permitted a few farther extracts. Stockport is specially mentioned, the Poor Law Commissioners having sent assistant commissioners to inquire into the state of things there. Among many other facts the assistant commissioners state :

"Of 15,823 individuals, inhabiting 2,965 houses, lately visited under the direction of a committee appointed for the purpose, 1,204 only were found to be fully employed, 2,866 partially employed, and 4,148 able to work *were wholly without employment*. The remaining 7,605 persons were unable to work. The average weekly income of the above 15,823 persons was 1s. 4½d. each. The average weekly wages of those fully employed was 7s. 6½d. each. The average weekly wages of those partially employed 4s. 7½d. each."*

Mr. Thornton goes on to add :—

"The distress of which there are such convincing proofs was aggravated at Stockport by local causes, but it existed in a degree very little inferior in most other manufacturing towns. It was particularly severe throughout Lancashire and those parts of Yorkshire in which the cotton manufacture has its principal seat. In Manchester there were said to be 9,000 families earning on an average only 1s. a week. In Bolton out of fifty mills, which had formerly employed 8,124 workmen, thirty mills with 5,061 workpeople were standing idle or working only short time. The weekly earnings of the bed-quilt and counterpane weavers were reduced to less than one

* 'Over Population and its Remedy,' p. 37.

half of their amount in 1838. Those of the hand-loom weavers, though long before depressed, had fallen again, from 6s. to 3s. 7½d. The destitution of the operatives and the embarrassments of their employers were shared more largely by the tradesmen and handicraftsmen whose customers they had been. In Bolton a diminution of £3,651 took place in the weekly amount of wages paid in twelve trades. Out of 150 carpenters, formerly earning 25s. a week each, only 25 remained in full work, and 15 in half work, and the number of masons was reduced from 140, earning 34s. a week, to 50, earning 10s. 6d. Very similar and not much more moderate were the sufferings of the clothworkers of Yorkshire and Wiltshire, of the silk weavers of Spitalfields and Macclesfield, the lacemakers of Nottinghamshire, the fitters of Staffordshire, and the hardware makers of the same county, of Warwickshire, and Sheffield. In the last mentioned town, where in 1836 there was not a single able-bodied man out of employment, there were, in 1842, 1,000 families supported by contributions from the trades to which they belonged, at the rate of 1s. 3d. weekly for each person, and hundreds more were in the receipt of parish relief. In Leeds 4,025 families, being one-fifth of the whole population, were dependent on the poor's rates. But it is needless to multiply examples, for no one can have forgotten the formidable riots that took place in the midland counties in the summer of 1842, and which sufficiently attested the desperate condition to which the operatives were reduced. Almost everywhere and in almost every manufacture the complaint of the workman was the same, of the difficulty of obtaining employment, and of the utter impossibility of earning a competent livelihood."*

As regards Scotch operatives specially, Mr. Thornton also writes:—

"Manufacturing operatives are in pretty much the same position in both countries. Those of Scotland shared even more largely than their southern brethren in the distress of 1840-42, when Paisley in particular exhibited scenes of woe far surpassing anything that has been related of Bolton or Stockport." †

The point of all this is that whatever may have been the ordinary wages in good times of manufacturing operatives, who constituted no doubt with the workmen in the building

* 'Over Population and its Remedy,' pp. 78 and 79.

† Ibid., pp. 37 and 38.

trades the most comfortable part of the working population of the United Kingdom, though after all only a small part of that population, yet the liability to extreme fluctuation that has been described has to be taken into account in comparing even such a population with a similar population at the present time. The complete or almost complete suspension of the ordinary wages for long intervals not only reduces the average wage, but shows a general condition of things which makes it impossible to compare at all the operative and superior workman of fifty years ago with similar classes at the present time, who have not for many years—in fact nearly for thirty years—been subject to any such general suspension of wages. The proportion of such operatives and superior workmen to the whole mass was much smaller fifty years ago than it now is, but even the smaller mass then was subject to an extreme of fluctuation of which the present generation has no conception.

IV.—THE WORKING CLASS CONSUMPTION OF MEAT FIFTY YEARS AGO.

AFTER the descriptions just quoted of the general condition of the masses fifty years ago, in which the question of their consumption of meat is referred to among other points, it may seem unnecessary to refer more at length to this question. It is only too plain that the masses of Irish peasants, and of English and Scotch agricultural labourers, as well as labourers in towns, who constituted a far larger proportion of the population of the country than the same classes do now, had most of them hardly any meat, very many none at all, in their diet, while the “occasional” meat some of them

had was seldom anything else than bacon. At the same time, the better classes of workmen, the aristocracy of the labourers, who were smaller in proportion to the population than the same classes are now, were liable to fluctuations of employment, during which the great majority had to endure very short commons indeed. The point of meat consumption is, however, so important as a test of condition, that at the risk of being tedious I propose to add a few more observations, in order specially to deal with a challenge given to my remarks on this head by Mr. Hutchinson in the article already referred to. Mr. Hutchinson's challenge enables me to illustrate in a striking manner the difficulty of using statistics properly, and the especial danger of using figures without thinking of the facts behind them.

The statement I made in my former paper which Mr. Hutchinson challenged was as follows :—

“It may be stated broadly that while sugar and such articles have declined largely in price [in fifty years], and while clothing is also cheaper, the only article interesting the workman much which has increased in price is meat, the increase here being considerable. The ‘only’ it may be supposed covers a great deal. The truth is, however, that meat fifty years ago was not an article of the workman's diet as it has since become. He had little more concern with its price than with the price of diamonds. The kind of meat which was mainly accessible to the workman fifty years ago, viz., bacon, has not, it will be seen, increased sensibly in price.” *

And Mr. Hutchinson's mode of challenging this statement was, first, to omit altogether the last sentence, which admitted that there was one kind of meat consumption in which the workman was interested fifty years ago—not a very candid proceeding, on which, however, I make no farther comment, my only object being to make quite clear what I did say — and next to refute me, as he supposed, by making the following reference to Porter's ‘Progress of the Nation :’—

* See *supra*, p. 380.

"In answer to this astounding statement," says Mr. Hutchinson, "I cull the following from Mr. Porter's 'Progress of the Nation,' Section 1, pp. 122 and 123, edition 1836:—

	£	s.	d.
Average earnings of labouring men, compiled from answers to queries from 856 parishes in England. Men only	27	17	10
Ditto from 668 parishes, with wages of wife and children	13	19	10
Annual average income of family	£41	17	8

To the farther question, 'could such a family subsist on the aggregate earnings of the father, mother, and children, and if so, on what food?' answers were received from 899 parishes to this effect:—

Number of parishes	899
No (simply)	71
Yes („)	212
Barely, or without meat	125
With meat	491

which gives an average of over 50 per cent. of the labouring class—that is, the poorest paid class of labour—who had meat as a portion of their regular diet. If we take into account the large number of artisan families, dwellers in towns, Mr. Giffen's extraordinary assertion will not be left with a leg to stand on.

"If farther refutation of Mr. Giffen's glaring misstatements were necessary, there are great numbers of men and women living who can supply data for a reliable history of the social condition of the people, even were there no written materials available for the purpose."

Mr. Hutchinson, according to this, believes that over 50 per cent. of the English agricultural labourers had meat as a regular portion of their diet fifty years ago, and not merely pork or bacon, which I had referred to as the kind of meat in which workmen were almost exclusively interested, but other meat—the meat which has since risen in price. He appeals not only to a table in Porter's 'Progress of the Nation,' but to the recollections of living men and women. After the passages I have already quoted, not merely recollections of people still living but contemporary statements by people

like the late Lord Beaconsfield, Mrs. Gaskell, Mr. Thornton and others, I am sure everyone will agree that Mr. Hutchinson's belief is itself astounding. Those who knew the working classes best fifty years ago, and their condition was inquired into frequently, were certainly under a different impression, while the records of money wages showed it to be impossible that they could have meat other than bacon as a regular part of their diet, while as to bacon there was itself a doubt.

But what of Porter's table which Mr. Hutchinson summarises? I believe that you will not be surprised to learn that the table, like many other statistical tables, requires a little consideration, and perhaps no one would have been more surprised than Mr. Porter to see the use which Mr. Hutchinson makes of it. The table is given by Mr. Porter to assist a comparison between the condition of English agricultural labourers and similar labourers in different continental countries, and he makes hardly any comment on it. The primary question submitted, however, to those who answered it, was whether the earnings recorded by way of answer to the previous questions were sufficient to enable the average labourer to live without parish relief. The "how" was a secondary question, not put so carefully, and to which it was obvious correct answers were not so easily to be obtained. The reply that the labourer could live or could not live without parish relief was definite enough, as also the statement that he could live barely or without meat, this being purely a negative statement; but the phrase "with meat" is obviously not a very precise one, and nothing more seems to have been meant by it than that the labourers in question had or could have meat occasionally, a feature of interest in making comparisons with foreign labourers, who never had meat at all, but not the same thing as a statement that

“meat” was a regular constituent of the labourer’s diet. Mr. Hutchinson’s gloss that half the poorest-paid class of labour fifty years ago “had meat as a portion of their regular diet,” is entirely unsupported by anything in Porter, or by a due consideration of what the phrase “with meat” in the table probably means.

I need not add that in dealing with such a table the value of the information contained should be scrutinised very carefully. Mr. Porter does not criticise the figures, but neither does he vouch for them, or lay much stress upon them; and when we come to look into them, I think it may be said that the average earnings arrived at by summarising the answers to a previous question is not itself a particularly good figure; while on such a question as how labourers live, the answers are still more difficult to summarise. The sources of the information are replies to questions in a circular from the Poor Law Board, by the clergyman or some local gentleman in each of nine hundred parishes—about a fifteenth part of the total parishes in England—who are asked to state what average wages are, and whether and how the labourers can live on them? Clearly in such replies there is an unusual opening for the personal error which the most careful scientific observations are exposed to. In making such an average, even the best observers would be liable to be swayed by their own personal experience; one man would take for a type the sober, thrifty labourer in regular employment, perhaps a labourer who was really more or less skilled; another would take the very rudest labourer; very few would or could take the trouble to make a proper average. In actual fact also many of the observers in the present case, as they show by their answers, were highly prejudiced, a correspondent in one parish saying the poor can do very well and are only too well off, and a correspondent in a neighbouring

parish saying they cannot live at all. Apart from prejudice, the difficulty of defining what is meant by an average wage is serious. To how many non-statisticians would any of us trust an inquiry as to what an average is, and how carefully we should scrutinise the replies when we got them to see what each man meant? But the replies thus obtained from a small percentage of places only are added together and divided by the number, so as to give the average earnings of agricultural labourers in all England, and so as to show how they live, whether with meat or not. How differently each man was likely to define in his own mind what the phrase "with meat" meant!

But we are not left to conjecture what random answers were given in reply to the question how the average labourer lived. I extract from Porter, and put in the Appendix,* the detailed summary of the answers, county by county (Appendix E.*), and I have also added in several cases (Appendix F.*) the actual answers from which this summary is compiled. It is impossible to go a step without perceiving that the phrase "with meat" is a very elastic expression. Thus to take Wiltshire, you will see from the table that out of twenty-four answers in that county, no less than twelve are put down as being to the effect that labourers had meat. I confess that after what I had read *passim* of the condition of labourers in Dorsetshire, Wiltshire, and Somersetshire, I was somewhat staggered by this, if the phrase "with meat" were to be understood as meaning that the Wiltshire labourer had meat as a regular portion of his diet, and not merely bacon "occasionally," but, as Mr. Hutchinson implies, other meat than bacon. The actual twenty-four answers from Wiltshire are, however, as follows, and the point is so serious that I need make no apology, I trust, for inserting them in the text:—

* See note, p. 409.

Name of Place and of Respondent.	Answers.
Alderbury Parish and Sarum Division— G. Ford, J.P.	Yes. Cannot say upon what food. Would be improved by renting a small plot of land.
St. Andrew, Blunsdon— J. J. Calley. J. Wild.	Yes; upon bread, potatoes and tea. Generally speaking, they could not.
Box— S. Pinchin, overseer.	Yes; principally upon potatoes.
North Bradley— S. Singer, assistant overseer.	Yes, certainly they could; comfortably.
Burcombe— J. Rogers, overseer.	In the present times they might; on good wheaten bread, butter, cheese, bacon, and potatoes; most of them having ground.
Castle Coombe— G. P. Scrope. [Answer also refers generally to the Hundred and Division of Chippenham.]	Could barely subsist on these earnings. Should the husband drink, or be below the average of labourers, the food would be potatoes alone, with little or no bread.
Chilmark— F. Lear, rector.	Yes; on the produce of the garden and pig-meat, and the corn afforded them at a reduced price.
Chippenham— G. S. Bradbury, assistant overseer.	Yes; food—bread, bacon, cheese, and potatoes.
Compton Chamberlaine— J. King, churchwarden and overseer.	Do not think they could.
Corsham— W. Arnold, assistant overseer and vestry clerk on behalf of Select Vestry.	Yes; chiefly on bread and vegetables..
Corsley— H. A. Fussel, churchwarden.	Yes; but almost wholly on vegetables, with bread occasionally.
Downton— G. Matcham. J. Reeves and J. G. Bailey, trustees of Stockman's Charity.	Yes; on bread and potatoes, with the addition of bacon about once a week. They would get no relief from the parish, but do not know how they manage.
Fisherton Anger— H. G. de Starek, curate. W. Blake.	They might live well on bacon, bread, and potatoes.
Fonthill Gifford— J. Still, jun., officiating minister.	A labourer can with difficulty supply his family with food, consisting of potatoes and bread.

Name of Place and of Respondent.	Answers.
West Grimstead, Pitton, and Farley— G. F. Watkins, curate of Grimstead and Farley. Heytesbury, C. A. A' Court, J.P.	Bread, potatoes, and other vegetables, and tea form their principal food with a small quantity of butter, cheese, and bacon. The families can and do subsist on these earnings. They have usually tea in the morning, potatoes and salt with a few greens in the middle of the day, with the addition of bread, and occasionally a small piece of bacon in the middle of the dish of potatoes at the evening meal.
Heddington— J. T. Du Boulay, rector.	Several families in this case have subsisted without parish relief on bread, potatoes, a little bacon, and tea.
District of Hungerford and Ramsbury— E.W.L. Popham, Lieut.-General.	The family could subsist on bread, meat, and vegetables, with wholesome beer, if the malt could be procured free of duty.
Liddington— H. Reeves.	Yes.
Monkton Farleigh— J. Long.	There is no want in this parish.
Norton Bavant— J. M. Sidford, overseer.	I consider they can live.
Pitton and Farley, united parishes— C. F. Watkins, curate of Farley.	They might on bread, butter, cheese, tea vegetables, and occasionally a bit of bacon.
Rodborne Tything (Malmesbury parish)— R. Pollen.	They subsist a good deal on potatoes, and could live decently on these earnings. They kill a pig once a year.
Whiteparish— G. Lawrence, J.P., and one of the Select Vestry.	A family can subsist on the earnings; the food—tea, bread, butter, cheese, and bacon; the latter, supposing a pig is kept, which is generally the case. Fresh meat is scarcely ever bought by the labourers.

It will be observed from this, that in only one of all the answers is meat *co nomine* spoken of; in all the others, where any sort of meat is spoken of, the word is bacon or pig-meat. Usually too the bacon is spoken of as only occasional. The curate of West Grimstead, for instance, speaks of a small quantity of butter, cheese, and bacon entering into the diet of

the labourers, and Mr. C. A. A'Court, J.P., of Heytesbury, speaks of "occasionally a small piece of bacon in the middle of the dish of potatoes at the evening meal." Mr. Lawrence, J. P., Whiteparish, says expressly, after referring to bacon, that "fresh meat is hardly ever bought by the labourers." We may thus see what the phrase "with meat" means. It is an occasional bit of bacon only: this is what Mr. Hutchinson means by meat forming a regular portion of the diet of the poorest paid class of labour fifty years ago.

While printing in full the answers from several other counties in the Appendix,* I may state that there are no doubt differences of counties, bacon being more regularly part of the labourer's diet in the north and east than in the south and west, including Wales. But butcher meat or fresh meat is not referred to specifically in more than a few instances out of the nine hundred as forming a part of the labourer's diet, and in all cases it is spoken of as an occasional luxury. The references to meat generally are more numerous, but the inference of course is that pork or bacon is meant, especially when the statements from neighbouring parishes are compared. (See Appendix F.)* There can be no question that the answers altogether, which can easily be found in the Blue-book, are very far indeed from supporting the statement that 50 per cent. of English agricultural labourers fifty years ago had meat as a regular portion of their diet. At most, a much smaller percentage had bacon, and usually the bacon was occasional only.

V.—AGGREGATE INCOME AND CLASSIFICATION FIFTY YEARS AGO AND NOW.

To illustrate the whole subject farther, I propose now to make a rough comparison between the incomes of the different classes of the people fifty years ago and at the present time

* See note, p. 409.

which will not only show that working-class incomes on the average have increased 100 per cent. or thereabouts, but in what way the improvement has arisen. What has been said already as to the non-agricultural classes having increased more than the agricultural, which have in fact declined, and as to population in Great Britain having increased while in Ireland it has diminished, has helped to give us some ideas on the subject; but the problem may be attacked directly. In my former paper I avoided any attempt of this sort. Assuming a certain gross income at the present time, and working backwards on the assumption that the working-class improvement had been 100 per cent. in fifty years, I gave a short table illustrative of my general idea as to what had occurred in the fifty years; but I attempted no comparison between a period fifty years ago and the present time, using the data actually in existence fifty years ago and comparing them with present data.

In making such a comparison now I do not propose any original work. Such a work seems hardly necessary. Short of a national census of incomes, the data for any statement of aggregate incomes must always be imperfect; while, notwithstanding necessary imperfections, I have always found such estimates as those of Mr. Dudley Baxter and Mr. Leone Levi, who have studied the subject, and made a good use of the materials they found, sufficient for any practical discussions. What I propose now to do is rather to point out how the figures which others have compiled are adapted to the present purpose, and how little cause there is to doubt the broad conclusions to be arrived at, although the detail is in many respects imperfect.

To begin with the present time. Mr. Dudley Baxter, in his estimate of the national income in 1867, arrived at the general conclusion that there were 13,720,000 persons in the United Kingdom, out of about 30 millions with in-

dependent incomes; of whom 1,162,000 were assessed to the income tax; 1,497,000 belonged to the middle and upper classes, but had incomes of less than £100 a year; and 10,961,000 belonged to what he called the "manual-labour class." The total income of all these classes he made out to be 814 million pounds, and the income of the manual-labour class only, which is by no means to be identified or confounded with that of the working classes in the economic sense of the word, 325 million pounds.

Mr. Leone Levi about the same time, dealing with the "working classes" only, with a class, that is, corresponding nearly to the "manual-labour" class of Mr. Dudley Baxter, dealt with numbers that were much the same, viz., 11 millions, and gave them an income of 418 million pounds. So far as I can judge, the result arrived at by Mr. Leone Levi is better justified than that of Mr. Dudley Baxter, and the detail of the calculation is at any rate set out with greater clearness. The main differences are apparently to be accounted for in two ways, apart from the different averages of wages applied to the number of wage-earners.* (1.) Mr. Levi allows four weeks idle time in the year, and Mr. Dudley Baxter deducts in most cases 20 per cent. from the total of fifty-two weeks for out of work, sick, and paupers; and (2) Mr. Dudley Baxter omits from the reckoning a certain number of foremen and overlookers who are included, as far as I can judge, in Mr. Levi's figures. The two differences stated would account, I think, for more than half the difference between Mr. Dudley Baxter and Mr. Levi.

The result is, that if we take Mr. Dudley Baxter's figures generally, but substitute Mr. Levi's as regards the manual-

* Some of these differences are important enough. For instance, dealing with domestic servants, Mr. Leone Levi calculates that the average wage is £35 per annum, and Mr. Dudley Baxter makes it £32 10s. for women and £23 for girls.

labour class, we should get even a better estimate, I think, for the aggregate income of the country twenty years ago than that Mr. Dudley Baxter gave. The total in round figures might have been put at 900 instead of 800 millions. I propose to start from about this basis in stating a figure for the aggregate income of the nation at the present time in the form which Mr. Dudley Baxter adopted.

To Mr. Dudley Baxter's figures thus amended we have now to add, first of all, one-fifth for the increase of population, and next a certain proportion for the average increase of earnings per head. Dealing with his figures in this way, and rearranging them so as to distinguish Great Britain and Ireland, we get the Table on p. 461.

Of course I do not put forward this figure as anything very exact. What I should like to point out is that to a large extent it is based on actual figures, those of the income-tax returns, while as regards the other figures the addition per head to those which Mr. Dudley Baxter and Mr. Levi gave nearly twenty years ago is, as a rule, only 10 per cent. The average increase per head, according to Mr. Levi's calculation, is more than this, and I have not used his figure, simply because I found Mr. Baxter's arrangement more convenient for the present purpose. I am quite satisfied, looking at many details I have before me, that the average increase of wages between 1867 and a date two or three years ago cannot have been less than 10 per cent.*

* In the table I made use of in my former paper, I assumed the figure of 1200 millions as the income of the people of the United Kingdom. I am satisfied, having looked more into the details since, that I could not have properly constructed a table like the present with any less figure than 1270 millions, which is Mr. Levi's figure. I have a strong impression indeed that a much larger figure might be taken, the figure of 445 millions as the income of the non-agricultural manual-labour class in Great Britain, giving an average per head very little more than what is allowed for the agricultural manual-labour

INCOME of the United Kingdom in 1883, based on Mr. Dudley Baxter's Estimate in 1867 as amended above, with an addition of about One-Fifth for Increase of Population, and about One-Tenth to the Income per Head of Classes not in Income Tax Returns, distinguishing also between Agricultural and other Incomes.

	Persons.	Income.		
		Agricultural.	Non-Agricultural.	Total.
I. GREAT BRITAIN.				
Income-tax incomes . . .	Mins. 1'4	Mins. £ 90	Mins. £ 486	Mins. £ 576*
Upper and middle classes be- low income tax . . . }	1'5	23	84	107
Manual-labour class . . .	11'6	70	445	515
Total . . .	14'5	183	1,015	1,198
II. IRELAND.				
Income-tax incomes . . .	0'1	10	16	26*
Upper and middle classes be- low income tax . . . }	0'3	7	4	11
Manual-labour class . . .	1'6	20	15	35
Total . . .	2'0	37†	35	72
Grand total . . .	16'6	220	1,050	1,270

The question, then, is how to make up a corresponding table for a period fifty years ago. The task is not so difficult as it seems, for one very good reason. Fifty years ago the income of the nation was in proportion much more largely agricul-

class. The total numbers of the manual-labour class, following Mr. Dudley Baxter's calculation, are 13,200,000, which is 1,000,000 more than Mr. Levi gives, although both authorities were substantially agreed for 1867. The figures are so large, that the difference in the average income per head is not material.

* Only the net income from Schedule B. is here included, the difference between gross and net under Schedule B. being carried over to the income of upper and middle classes not included in income-tax returns.

† I believe this figure should be really somewhat larger. But it will be understood this Table does not pretend to accuracy of detail. I have simply followed the plan described in the heading, so as to obtain general figures good enough for the present discussion.

tural than it is now, while the total income from agriculture is ascertainable with more or less exactness. It is in fact possible, if we can arrive at a correct estimate of the agricultural income, to state, with the help of the income-tax returns for 1843 for Great Britain, and 1854 for Ireland, very nearly three-fourths of the aggregate income of the country, making an estimate only for the remaining fourth or thereabouts. I have drawn up the following table :—

INCOME OF THE UNITED KINGDOM IN 1835-40, BASED ON INCOME-TAX RETURNS FOR 1843, ESTIMATE OF VALUE OF AGRICULTURAL PRODUCE, AND ESTIMATES OF AGRICULTURAL WAGES, AND OTHER DATA.

	Persons.	Income.		
		Agricul- tural.	Non-Agri- cultural.	Total.
I. GREAT BRITAIN.	Mlms.	Mlms. £	Mlms. £	Mlms. £
Income-tax incomes . . .	1·0	63	165	228
Upper and middle classes be- low income tax . . . }	1·0	20	62	82
Manual labour classes . . .	5·5	42	80	122
Total . . .	7·5	125	307	432
II. IRELAND.				
Income-tax incomes . . .	0·1	12	10	22
Upper and middle classes be- low income tax . . . }	0·3	8	4	12
Manual-labour class . . .	3·5	34	15	49
Total . . .	3·9	54	29	83
Grand Total . . .	11·4	179	336	515

Comparing this table with the similar table for the present time on p. 461, it is evident at once that the inferences drawn from the increase of many different money wages throughout the country, and from the obvious changes in the composition of the mass of population in fifty years, as

explained in my former paper and in the earlier part of the present paper, are fully confirmed. According to this new and independent statement, the income of the manual-labour classes per head has increased on the average much more than 100 per cent.

	Numbers.	Income.	Income per head.
Manual-labour class at present .	Mlms. 13·2	Mlms. £ 550	£ 41 $\frac{2}{3}$
„ fifty years ago.	9·0	171	19

This is even more than anything I ventured to estimate before.

It is also evident how it is that the improvement in the position of our working classes is so great as compared with fifty years ago. The changes I referred to in the earlier part of this paper have obviously occurred. While the population of Ireland fifty years ago was one-third of the total, it is now only one-eighth or thereabouts. While the agricultural income fifty years ago was nearly two-fifths of the total, it is now only one-sixth. While the manual-labour class has grown from 9 millions to 13 millions, or over 40 per cent. in numbers, the increase in Great Britain is from 5 $\frac{1}{2}$ to 11 $\frac{1}{2}$ millions, or about double, and in Ireland there is a decrease from 3 $\frac{1}{2}$ to little over 1 $\frac{1}{2}$ millions. While the agricultural income, with numbers diminishing, has improved greatly, the income from other sources has improved even more, and the whole increase of population is sustained by it.

The only doubt about these figures, I think, will be whether they fully represent the extent of the change that has taken place. They only show an average improvement of 70 per cent. in the money wages per head of the non-agri-

cultural classes in Great Britain, comparing the average fifty years ago with the average at the present time. But this improvement implies that on the average labour in the United Kingdom has improved over 100 per cent.; because the non-agricultural labour of Great Britain, which was the highest paid fifty years ago, has increased to a disproportionate extent. It has increased enormously in numbers, while agricultural labourers in Great Britain have rather declined, and labour in Ireland, where wages were still lower than in Great Britain, has enormously diminished.

It will be urged, perhaps, that what the working classes in Great Britain have to do with is their own condition. If the non-agricultural classes are only 70 per cent. better off in money wages, it will be urged that they have not so much to boast of. For reasons already given I doubt if this percentage represents the whole improvement in the case of the artisan classes, especially if we take into account the reduction of hours, and such changes as have been made by the abolition of the truck system and the like improvements; but admitting it to be the maximum improvement in their case, it is really most essential to keep in mind that in a comparison such as that we are engaged upon, we are not comparing merely the artisan of the present day with the artisan of fifty years ago, but to a large extent we are comparing classes who are non-artisans with the agricultural labourers, whether in Great Britain or Ireland, from whom they are really descended. If the descendant of an Ulster peasant or farmer is now earning 25s. a week, or thereabouts, while employed in the lowest form of skilled labour in Great Britain, we have to compare him not merely with the similar labourer fifty years ago who was earning 12s. to 15s. a week, but with the still lower paid labourer of Ireland, who was earning, at the outside, 8s. per week.

Astounding as it may seem at first, therefore, it is not really so astounding to find that the position of the wage-earner in the United Kingdom has, on the average, improved not merely 100 but over 100 per cent. in the last fifty years, as far as money wages are concerned.

It would of course be a cause for dissatisfaction if nothing more had been done in the last fifty years than to elevate the masses of the community to a level rather higher than that of the lowest paid non-agricultural labourer fifty years ago. The very general averages we have been dealing with, however, do not bring out fully the internal changes which have been occurring in the artisan classes, or the fact that numbers have been passing over into the classes of income-tax payers, or into the upper and middle classes just below the income-tax limit—that these classes in turn have been increasing in rather larger numbers than the community as a whole. In this connection the figures I referred to earlier in this paper are specially important. The classes whose improvement must have caused the increase of assessments under Schedule D. in England, between 1843 and the present time, must be the artisans and lower middle class with incomes under £100; those classes, in other words, just below the income-tax limit. I may refer, moreover, to the undoubted fact which appears from the most recent census returns, that the commercial class and professional class, which include clerks, doctors, teachers and others belonging to the middle and upper classes, have increased more rapidly than the increase of the general population. The figures are unusually difficult of comparison, but the following may, I believe, be accepted as a correct approximation to the facts in England:—

STATEMENT SHOWING THE INCREASE OF THE PROFESSIONAL AND
COMMERCIAL CLASSES IN ENGLAND BETWEEN 1851 AND 1881.*

Year.	Professional.	Commercial.
1851 . . .	357,000	529,000
1861 . . .	482,000	623,000
1871 . . .	684,000	815,000
1881 . . .	647,000	980,000

It is thus evident that along with the substitution of artisan classes for rude labourers, the proportion to the whole community of the higher paid artisans and of professional workers and clerks, who are economically members of the working classes just as much as the manual-labour classes themselves, has been greatly increasing. It would have been a miracle if, with all the increase of machinery and development of artistic skill which has been going on, any other change had taken place. A general improvement of the masses, without a relative increase of the numbers receiving high rates of remuneration, appears to be a contradiction in terms.

Before passing from these figures, it will be interesting to compare, in a more complete form than was possible when I gave my former paper, the increase of the income of the last fifty years which belongs to capital, and the increase which belongs to labour. Using and expanding the table given in my former address (see the previous Essay, p. 404), and incorporating some of the above figures, I have compiled the following Table:—

* For details, see Appendix G., *i.e.*, the Statistical Society's *Journal* for March, 1886. See note, p. 409.

TABLE SHOWING THE PROPORTION OF THE INCREASE OF INCOME IN THE LAST FIFTY YEARS BELONGING TO CAPITAL AND TO LABOUR RESPECTIVELY.

	1843.	Present Time.	Increase.	
			Amount.	Per cent.
(1.) Capitalist classes from capital.	Mlrs. 190	Mlrs. 400	Mlrs. 210	125
(2.) Capitalist "working" income in income-tax returns	154	320	166	100
(3.) Working income of upper and middle classes below income-tax limit.				
(4.) Manual-labour class . . .	171	550	379	200
	515	1,270	755	—

These figures of course make no pretence to exactness. The lines of division are by no means clear, and there is an especial difficulty in the matter, which I have had no time to investigate, occasioned by the alteration ten years ago in the minimum limit of the income tax. But for our present purpose exactness is not required; the more the subject is looked into the more it becomes clear that the greater part of the increased money earnings of the community of this country in the last fifty years has gone to labour and not to capital. The chief effect of the improvement has been to raise enormously in the scale of living the masses of the community.

It will be observed that in this table, as I have often done throughout the paper, I have spoken of the "working classes" in the economic sense, as being a much larger class than the "working classes" as popularly understood. It is expedient, I believe, with reference to many Socialist doctrines, to emphasise the facts that the working classes

in the larger sense do include many more people than the manual-labour classes ; that their work is equally an essential contribution to the whole production of the community ; and that in any case, the figures we have been dealing with being those of income, we must not commit the mistake of supposing that there is any one class which in any special sense produces that income. In the working income included in the income-tax returns or forming part of the income of the upper and lower middle classes not included in these returns, you have such incomes as those of artists, authors, actors and actresses, singers, and many more who are as much workers as any member of the artisan or labouring classes. Their incomes go to swell the large total of over 1200 millions with which we have been dealing. When we are speaking of the working classes of the community, we should include every man who works. In this sense there is certainly no doubt that it is not the capitalist who has reaped most from the economic improvement of the last fifty years. As the result of the excessive competition which the multiplication of capital has produced, capitalists all round have *per force* to be content with a lower rate of profit. Hence while capital has increased, the income from capital has not increased in proportion. The increase of earnings goes exclusively, or almost exclusively, to the "working classes."

VI.—SUMMARY AND CONCLUSION.

It will be convenient now to sum up the conclusions which have been arrived at.

The contentions of my paper two years ago were that the working classes of the United Kingdom had enjoyed a great

improvement in their money wages in the last fifty years, an improvement roughly estimated at 50 to 100 per cent. ; that the hours of labour had been shortened in the same period 20 per cent. ; that along with this improvement there had been a general fall, or at any rate no increase, in the prices of the principal articles of general consumption, with the exception of rent and meat, where the increase still left to the labourer a large margin for increased miscellaneous expenditure ; that meat in particular was not an article of general consumption by the masses of the community fifty years ago as it has since become ; that the condition of the masses had in fact improved vastly, as was shown by the diminished rate of mortality, the increased consumption per head of tea, sugar, and the like articles, the extension of popular education, the diminution of crime and pauperism, and the increase of savings bank deposits, as well as of other forms of saving among the masses ; and that, finally, neither the amount of capital nor the return upon it, and especially not the return upon capital, had increased so much as the income of the workers of the country from their work.

In the present paper these conclusions have been additionally supported.

1. It has been shown, in opposition to various objections to the former paper, that the estimate of 50 to 100 per cent. as the average improvement of the money wages of the working classes in fifty years, is not only not excessive but under the mark. Reasons have been urged for attaching special importance, in comparisons of money wages fifty years ago and at the present time, to the instances of maximum increase, where a given employment at a given place is compared with the same employment at an earlier period. It has farther been pointed out, on a broad survey of the facts, that the composition of the people of the United Kingdom is entirely

changed from what it was fifty years ago; that whereas fifty years ago one-third of the working masses were Irish peasants earning a doubtful 4s. a week on the average, and the agricultural population of Great Britain constituted another third of the total, this class likewise earning much smaller incomes than the third class, consisting of the non-agricultural workers of Great Britain, yet now the Irish labourers are less than one-eighth of the total, the British agricultural labourers are also one-eighth only, and the remaining three-fourths are artisans, and other non-agricultural workers in Great Britain, who constituted fifty years ago only about a third of the whole population. Even if the wages of the different classes had not increased, this change in the composition of the mass would itself imply an average improvement. An improvement of 50 per cent. in the unit of each class would imply of itself, allowing for the change in the relative numbers of the classes, an average improvement of nearly 100 per cent.

2. The probability of a great average improvement is farther shown by the magnitude of the improvement in the case of the units of the worst paid labour, where there has been a diminution in numbers. In Ireland the improvement in the wages or earnings of small farmers and labourers is at least 100 per cent., the doubtful average 4s. of fifty years ago having been converted into a much less doubtful 8s., or its equivalent, at the present time. In Scotland and Wales the average improvement in agricultural labour has equally been about 100 per cent., from 9s. in the former case to 18s., and from 7s. 6d. in the latter case to 15s. In England the changes are not quite so extreme, but from 8s. to 13s., and from 10s. to 16s. are not uncommon figures, fully justifying Sir James Caird's conclusion, which I quoted in my former paper, as to there having been an improvement of 60 per cent.

3. The worst paid labour in Great Britain of a non-agricultural kind has equally undergone improvement. In the Metropolis, and the leading manufacturing towns, the rise ranges from 15s. to 25s., or about 70 per cent., but in other parts of the country, as in Glasgow, there are cases of an advance of 100 per cent., the improvement in wages generally appearing to be greater in places like Glasgow than in the leading towns of England.

4. There has also been a great increase in the number of income-tax assessments, implying an improvement of the artisan and other classes just below the income-tax limit.

5. There has been a simultaneous improvement in France, Germany, and other countries. The improvement in the United Kingdom is not an isolated fact.

6. There is accordingly nothing to be astonished at in an average improvement of the money wages of "working classes" in the last fifty years amounting to 100 per cent. When the facts are considered, such an improvement is, in reality, antecedently probable.

7. The condition of the masses fifty years ago was in truth deplorable, as is shown by numerous extracts from the writings of Thomas Carlyle, Lord Beaconsfield, Mrs. Gaskell, and Mr. Thornton, and by references to numerous Blue-books. Even the manufacturing operatives of England, the most advanced class of all, were liable to frequent and great privations, through the complete suspension of work, and had at times to live on very "short commons."

8. With regard to the consumption of meat by the agricultural classes of England, as to which the statements made in my former paper were specially challenged, farther inquiry has shown that the ground of the challenge was singularly erroneous. A table in Mr. Porter's 'Progress of the Nation,' which was quoted by an objector to prove that 50 per cent.

of the agricultural classes of England had meat as a regular portion of their diet half a century ago, is found to show, when the data are referred to, that much fewer than 50 per cent. had "bacon" as an *occasional* portion of their diet; and that there is hardly once mention of any other meat as a portion of the agricultural labourer's diet among the statements from which the table is compiled.

9. Finally it is shown, on a comparison of incomes in the aggregate, that while the total income of the country fifty years ago was about 500 millions only, of which two-fifths were derived from agriculture, the present income, on the authority of Mr. Dudley Baxter and Mr. Leone Levi, may be placed at about 1270 millions, of which only one-sixth is from agriculture. At the same time the agricultural labourer is better off, because, while his numbers have diminished, the net income from agriculture, and his share of that income, have both increased. Farther, the working masses of Great Britain have more than doubled their number in the interval, simultaneously with a vast diminution in Ireland, whose aggregate income remains much the same, though with a diminished number to share it. Hence the increase of income in the fifty years has been mainly among the higher-paid classes, and the final result is that whereas fifty years ago the working masses of the United Kingdom, amounting to 9 millions, earned in all about 171 millions, or £19 per head, the working masses, now amounting to over 13 millions, earn about 550 millions, or nearly £42 per head, an increase of much more than 100 per cent.

10. When the increase of earnings from labour and capital is compared, it is found that the increase from capital is from 190 to 400 millions only, or about 100 per cent.; the increase from the "working" of the upper and middle classes is from 154 to 320 millions, or about 100 per cent.; and the increase

of the income of the manual labour classes is from 171 to 550 millions, or over 200 per cent. In amount the increase due to capital is about 210 millions; to labour of the upper and middle classes, 166 millions; and to labour of the manual-labour classes, 379 millions, a total increase of 755 millions.

The general conclusion from all the facts is, that what has happened to the working classes in the last fifty years is not so much what may properly be called an improvement, as a revolution of the most remarkable description. The new possibilities implied in changes which in fifty years have substituted for millions of people in the United Kingdom who were constantly on the brink of starvation, and who suffered untold privations, new millions of artisans and fairly well-paid labourers, ought indeed to excite the hopes of philanthropists and public men. From being a dependent class without future and hope, the masses of working men have in fact got into a position from which they may effectually advance to almost any degree of civilisation. Every agency, political and other, should be made use of by themselves and others to promote and extend the improvement. But the working men have the game in their own hands. Education and thrift, which they can achieve for themselves, will, if necessary, do all that remains to be done. Whatever else can be done, will be done all the more easily if education and thrift are practised. I am not speaking now theoretically; I know from experience, and from intimate acquaintance with working men themselves, using the words "working men" this time in a popular sense, what can be done on very small means. It will be a shame to English working men if they cannot with comparatively ample means raise themselves to the standard of education which Scotch peasants have long since been able to reach with what, until recent years, were very narrow means.

In conclusion, let me point out that in the near future there is a very serious difficulty impending; the difficulty in fact is already upon us. Since I wrote two years ago, prices have farther declined, which would seem to give working men even a greater advantage than they had then. But this decline is due to causes, as I believe, which necessarily involve a fall in money wages and profits. Wages and profits must to some extent be adjusted to the changed prices. Hence the present time I have spoken of now has been rather that of two years ago, when my former paper was written, than the actual present. If I were to take account of the most recent changes in prices, I should also have to take account of the most recent changes in wages, which are all in a state of transition. What I have to suggest to all concerned is that the fall of prices, considering the length to which it has gone, is a phenomenon which working men should carefully study in their own interest, and that they should be prepared to some extent for a reduction in money wages. What concerns them is not "money" wages, but "real" wages. It is quite possible that in a period when money wages are falling, along with all other money values, their real condition may improve, because the fall in money wages is less than the fall in the money prices of the principal commodities which they consume. The question is not one which working men or any other class can avoid.

THE END.

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